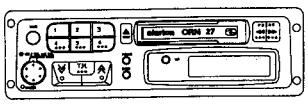
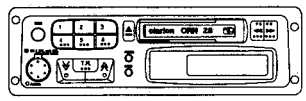
Clarion Co., Ltd. Export Division—22-3, Shibuya 2-chome, Shibuya-ku, Tokyo, 150 Japan Tel: 03-3400-1121 Fax: 03-3400-8679 Telex: J22908, J22152
Service Dept.—50 Kamitoda, Toda-shi, Saitama, 335 Japan Tel: 0484-43-1111 Telex: J2962628 CLAFAC-J

clarion Service Manual

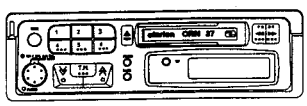
Published by Service Administration Section



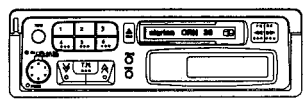
Model CRN27



Model CRN28



Model CRN37



Model CRN38

MW/LW/UKW CASSETTE STEREO

Model

CRN27 (PE-9689A-A)
CRN28 (PE-9690A)
CRN37 (PE-9687A-A)
CRN38 (PE-9688A)

SPECIFICATIONS:

[RADIO SECTION]

Circuit system: Super Heterodyne

Tuning system: Digital Electronic Tuning

Receive range:
UKW 87.5MHz to 108.0MHz
MW 522kHz to 1,620kHz
LW 153kHz to 281kHz

Intermediate frequency:
UKW 10.7MHz
M/L 450kHz

Quieting sensitivity:
UKW Less than 14dB
MW Less than 32dB
LW Less than 39dB

Separation: UKW More than 20dB

[TAPE SECTION]

Reproduction system:
4 track, 2 channel stereo cassette tape playback

Tape speed: 4.76cm/sec

Wow and flutter: Less than 0.25% (W.R.M.S.)

Separation: More than 35dB

Crosstalk: More than 40dB

S/N ratio: More than 46dB

FF time: Less than 180sec. (C-60)

[SYNTHESIS]

Load impedance: 4Ω

Power output: 3.5Wx2 (at 10% distortion)
7Wx2 (at max. output)

Power supply voltage:
DC 14.4V (10.8V to 15.6V)
Negative ground

Current consumption:
Less than 2A

Dimensions:
CRN27 Width 178 1.5mm
CRN28 Height 52.5mm
CRN37 Depth 155.0mm
CRN38 Weight 1.8kg

COMPONENTS

- **CRN27 (PE-9689A-A)**
- **CRN28 (PE-9690A)**
- **CRN37 (PE-9687A-A)**
- **CRN38 (PE-9688A)**

	Main Unit	1
1497-0102-0	Parts Bag	1
1497-0132-0	Parts Bag	1
2802-5014-0	Tap Screw M5X14	1
2809-2682-0	Self Taping Screw 2.6X8	1
2832-5081-0	Nut M5X0.8	1
4131-8771-0	Plate Nut	1
2842-4510-0	Metal Washer	1
2843-5288-0	Spring Washer	1
4131-8531-0	Mounting Stripe	1

- **CRN27 (PE-9689A-A)**
- **CRN28 (PE-9690A)**

4131-3831-2	Cabinet Mounting Stud	1
4131-8701-0	Pull-Out Key	2

ADJUSTMENT

- **MAIN BOARD**

ALIGNMENT	INPUT	ADJUST LOCATION	TEST LOCATION	READING
FM Bandwidth	98.1 MHz, 60dBuV 0% mod.	L402	Pin 7 to 13 of IC402	0 ± 0.05V
FM DX Autostop sensitivity	98.1 MHz, 60dBuV 30% mod.	VR404	Across C484	6.5 ± 0.3V
FM LO autostop sensitivity	98.1 MHz, 45dBuV 30% mod	Short circuit Q416 , adjustVR402	Across C484	6.5 ± 0.3V
FM MPX circuit Vco frequency	98.1 MHz, 55dBuV, 0% mod	Add 180kΩ between IC404 and GND, adjust VR401	IC404 pin 24	19kHz ± 50 Hz
FM stereo seperation	98.1 MHz, 65dBuV,100% mod, 400Hz,L-channel only	Turn VR403 fully anti-clockwise, adjust VR405		Max. stereo separation
10dB stereo separation	98.1 MHz, 39dBuV,100% mod, 400Hz, L- channel only	Adjust VR403		L-channel = 0dB, R-channel = -10dB
VF min. volume level	98.1 MHz, 100% mod, MONO	Min. volume press VR PCB spring, adj. VR301		Speaker output = 0.775 Vrms

- **LW/MW TUNER**

ALIGNMENT	INPUT	ADJUST LOCATION	TEST LOCATION	READING
MW VT	522kHz 1620kHz @ antenna	L207 TC203	Collector of Q401 on main PCB	1.0 ± 0.05V (± 0.1V)* 7.8 ± 0.1V (± 0.2V)*
LW VT	153kHz @ antenna	L208	Collector of Q401 on main PCB	1.2 ± 0.05
MW sensitivity	603kHz & 1404kHz < 30dBuV	L202, L204, TC202	Speaker output	Max. output
I.F.T.	603kHz < 30dBuV	L210, L211	Speaker output	Max. output
LW sensitivity	164kHz & 281kHz < 30dBuv	L203, L205, TC204, TC205	Speaker output	Max. output
MW seek sensitivity	999kHz @ nominal specification	VR201	across VR201	0.6 ± 0.01V

*Notes: After casing, check reading, adjust again if nescessary.

- **FM TUNER**

ALIGNMENT	INPUT	ADJUST LOCATION	TEST LOCATION	READING
FM VT	87.5MHz 108.1MHz @ antenna	L104 L104	Collector of Q401 on main PCB	1.2 ± 0.1V 7.8 + 0.2 -0.1V
Sensitivity	90.1MHz 106.1MHz 98.1MHz f Mod. = 22.5kHz @ antenna	Tune to 90.1MHz, adjust L103 Tune to 106.1MHz adjust TC101 Tune to 98.1MHz adjust L101	Speaker output	Max. sensitivity
I.F.T.	98.1MHz with 3%THD of audio signal at minimum input level possible @ antenna	L107	Speaker output	minimum THD

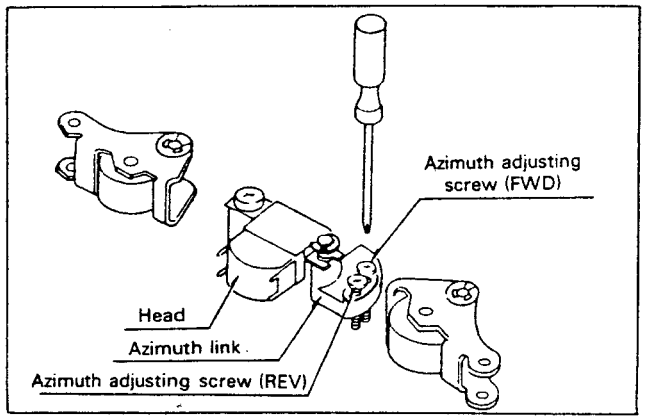
Notes: All spring coils must be firmly fixed with wax. The ferrite core of L104 must be fixed by a small drop of white paint after alignment.

- **HEAD AZIMUTH ADJUSTMENT**

1. Playback a TEAC MTT-114 test tape.

2. Adjust the tone control and the balance control to the mechanical centre position and set the volume control to medium position.

3. Adjust the head azimuth alignment screw to obtain the maximum power output from the set.



■ EXPLANATION OF IC's:

Refer to description in IC service manual vol. 1.	
LA1140	FM IF Systerm
µpc1228ha	AF OP. Amp

Refer to description in IC service manual vol 2.	
TDA1579	AF Power Amp

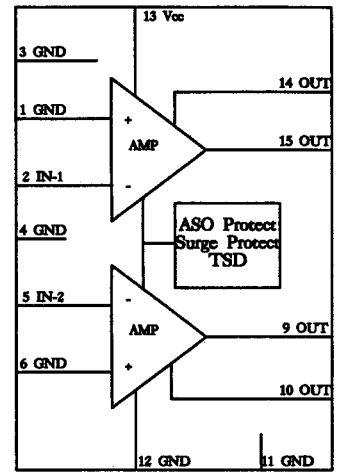
Refer to description in IC service manual vol 3.	
LA1135	AM Tuner

Refer to description in IC service manual vol 4.	
AN7465	FM MPX Stereo Demodulator

■HA131119 3130-2690-0 Dual Audio Power Amplifier

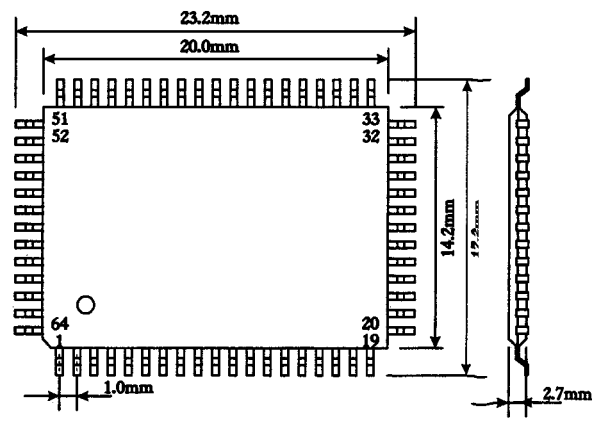
Note: Dual in line package type IC.

Block Diagram



■µPD1723 3130-2700-0 DTS and controller

Outward Form



II. Outline

(1) The IC is a 4-bit CMOS microcomputer for digital tuning, containing a prescaler, a PLL frequency synthesiser, IF counter and an LCD driver all in one chip.

III. Terminal Connection

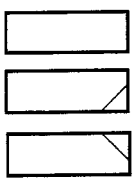
Pin No	Terminal	I/O	Function
1			No connection
2	EO1	O	Error output pin for PLL
3	EO2		
4	VDD1		Supply voltage of 5V
5	AM	I	AM local oscillation signal input.
6	FM	I	FM local oscillation signal input.
7	CE	I	Chip enable: When pin is low, LCD display depends on setting the CLOCK-DISABLE switch of the diode jumper.
8	VDD2		Supply voltage of 5V
9	LOCAL	O	Local control output: In radio mode, LOCAL/DX output pin, in the DX state, the LCD 'DX' displays lights.
10	AUTO-LOCAL	O	Auto-Local control output: In radio mode 1. High during SEEK and SCAN. 2. High when not tuning.
11	$\overline{\text{AGC-CUT}}$	O	AGC-CUT control output: In radio mode, low level is output during auto-tuning, auto-store and the stop check of the memory scan.
12	APS	O	APS control: In Tape mode, in APS mode the LCD 'APS' displays lights.
13	METAL	O	Metal output: In tape mode , in Metal mode the LCD 'METAL' displays lights.
14	MONO/$\overline{\text{DOLBY}}$	O	Monaural/dolby output: Low = Mono for radio mode High = Dolby for Tape, mode.
15	SDK	O	SDK output: H = SDK on.
16	AM IF	I	AM IF input: AM station detection.
17	FM IF	I	FM IF input: FM station detection.
18	MUTE-EN	I	Mute enable control input: High = on.
19	AUX	O	AUX control output:
20	$\overline{\text{MUTE}}$	O	Mute control output: L ow= Mute
21	MW	O	Band contol output:
22	FM	O	PORT / FM / MW / LW MW / L / H / L FM / H / L / L
23	LOUD	O	Loudness control output: When pin is High, LCD 'LOUD' displays lights.
24	XO	I	Crystal resonator input pin.
25	X1		
26	GND1		Ground
27			No connection
28	LCD27	O	LCD segment signal output pin.
29	LCD26		
30	LCD25	O	LCD segment signal output pin.

Pin No.	Terminal	I/O	Function
31	LCD24	O	LCD segment signal output pin
32	LCD23		
33	LCD22		
34	LCD21		
35	LCD20		
36	LCD19		
37	LCD18		
38	LCD17		
39	LCD16		
40	LCD15		
41	LCD14		
42	LCD13		
43	LCD12		
44	LCD11/KS11	O	LCD Segment signal and key source signal output pin.
45	LCD10/KS10		
46	LCD9/KS9		
47	LCD8/KS8		
48	LCD7	O	LCD segment signal output pin.
49	LCD6		
50	LCD5/KS5	O	LCD Segment signal and key source signal output pin.
51	LCD4/KS4		
52	LCD3/KS3		
53	LCD2/KS2		
54	LCD1/KS1		
55	LCD0/KS0		
56	COM1	O	Common signal output to LCD
57	COM2		
58	GND2		Ground
59	K3	I	Key matrix key return signal input pins.
60	K2		
61	K1		
62	K0		
63	SK	I	SK input: SK signal detection pin, High when radio recieving traffic info.
64	$\overline{\text{INTERRUPT}}$	I	Low = Interrupt

IV. Key Matrix

IN \ OUT	K0(pin 62)	K1(pin 61)	K2(pin 60)	K3(pin 59)
LCD0/KS0	M1	M2	M3	M4(NR)
LCD1/KS1	M5(APS)	M6(METAL)	AUX	PRESET SCAN/AUTO STORE
LCD2/KS2	MANUAL-UP(MA)	MANUAL-DOWN(HA)	CLK/FREQ	BAND
LCD3/KS3	T.MODE	SDK	LOUD	LOCAL/DX
LCD4/KS4	SEEK-UP	SEEK-DOWN	SCAN-UP	SCAN-DOWN
LCD5/KS5	MONO			
LCD8/KS8	STEREO	DIR	TAPE	CD
LCD9/KS9	B0	B1	PRIORITY	CLOCK-DISABLE
LCD10/KS10	A0	A1	A2	25kHz/50kHz
LCD11/KS11	IF-COUNT			TP

Key:



Momentary switch

Diode jumper

Alternate switch

V. Momentary Switch

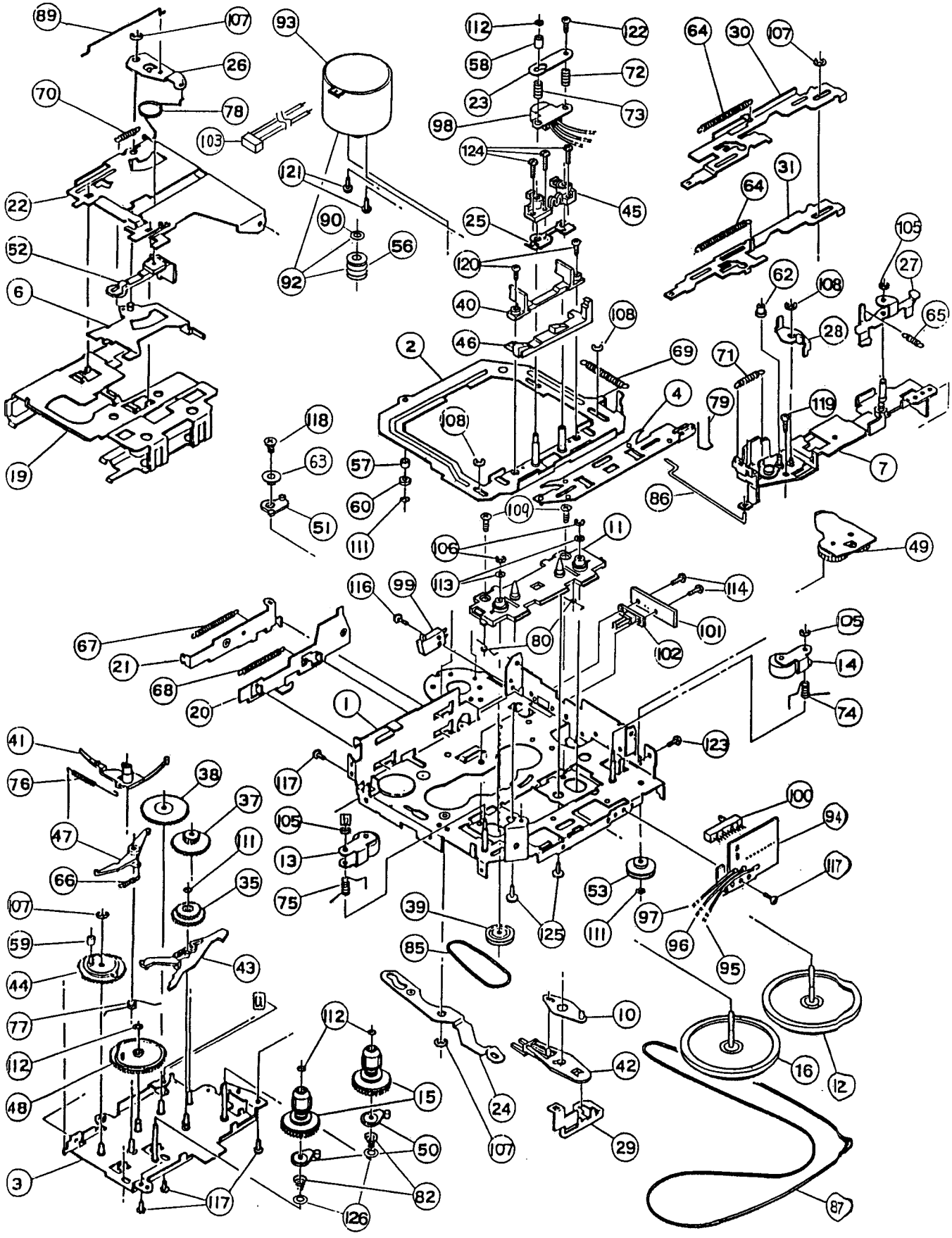
SWITCH NAME	FUNCTION
BAND	Band selector key FM1-FM2-FM3-MW-LW
M1 - M6	Calling and writing the preset memory - there are a maximum of 6 stations per band. - there are 3 FM bands, 2 MW bands, 1 LW band - Push M1 - M6 Key for less than 2 secs. to call frequency written in memory. - Push M1 - M6 key for more than 2 secs. to write frequency to memory. - At time memory is written or called the MUTE pin is logic low for 1 sec.
P.SCAN/ A.STR	Preset scanning function/ Auto Store - In radio mode, the preset scanning operation is started when the key is released within 2 sec, while the auto store operation is started when the key is held down over 2 sec.
SEEK UP/SEEK DOWN	Search band for station and stop when signal received. - When SDK function is on, seek tuning is stopped when both SK input pin is high and either AM IF or FM IF pin is high.
MANUAL UP/ MANUAL DOWN	1 step/1 push and continuous tuning. - 1 step/1 push tuning is executed when the MANUAL UP or MANUAL DOWN key is pressed for less than 500ms. - Continuous tuning is executed when the MANUAL UP or MANUAL DOWN key is pushed for more than 500ms. - When "MANUAL" is not displayed on the LCD these keys behave the same as SEEK UP or SEEK DOWN.
SCAN UP/SCAN DOWN	Searching and stopping search for 5 sec when the station is received. - The frequency is flashed at 1Hz during this function. - Pushing SCAN UP or SCAN DOWN continuously prevents tuning from stopping.
CLK FREQ	Display/ set time. - Clock is adjusted using MANUAL UP or MANUAL DOWN key while CLK/ FREQ key is pressed - CLOCK display is shown for 5 sec on pressing CLK/ FREQ key.
SDK	Recieve traffic information. - Valid in Europe, FM band only. - If SDK function is on, the VF mark is displayed, if SK pin is High the SK mark is displayed. - Band change turns off SDK function.

■ EXPLODED VEIW • PARTS LIST:

☐ Tape mechanism section 4101-3801-0

REF. NO.	PART NO.	DESCRIPTION	QTY
1	4102-1901-0	MAIN CHASSIS ASSY	1
2	4102-1902-0	HEAD PLATE ASSY	1
3	4102-1903-0	REEL BASE ASSY	1
4	4102-1904-0	FR CHANGING ARM ASSY	1
6	4102-1906-0	EJECT CAM LOCK ASSY	1
7	4102-2078-0	LEVER BRACKET ASSY (D)	1
10	4102-1910-0	FR ARM (A) ASSY	1
11	4102-2079-0	CM BRACKET ASSY (X)	1
12	4102-2046-0	FLY WHEEL ASSY	1
13	4102-2080-0	PINCH ARM (R) ASSY	1
14	4102-2081-0	PINCH ARM (L) ASSY	1
15	4102-2082-0	REEL SPINDLE ASSY (S)	2
16	4102-2047-0	FLY WHEEL ASSY (R)	1
19	4102-2083-0	CASSETTE HOLDER (X)	1
20	4102-1917-0	EJECT CAM ASSY (CDS36)	1
21	4102-1918-0	EJECT LEVER	1
22	4102-2084-0	CASSETTE HANGER (X)	1
23	4102-1920-0	SPG PUSH PLATE	1
24	4102-1921-0	REVERSE LEVER	1
25	4102-2108-0	ADJUSTER SHIM (X)	1
26	4102-1923-0	CENTRE PLATE CDS36	1
27	4102-2085-0	LOCK ARM	1
28	4102-2029-0	CHANGE LEVER (B)	1
29	4102-1925-0	FR ARM (B)	1
30	4102-2086-0	FF LEVER	1
31	4102-2087-0	REW LEVER	1
35	4102-1930-0	DECK SPARE PART	1
37	4102-2088-0	REDUTION GEAR (A)	1
38	4102-1932-0	REDUCTION REAR B	1
39	4102-2089-0	PULLEY GEAR	1
40	4102-2090-0	TAPE GUIDE	1
41	4102-1935-0	RATCHET	1
42	4102-1936-0	FF ARM	1
43	4102-1937-0	SENSOR ARM	1
44	4102-1938-0	SELECTOR GEAR CDS36	1
45	4102-2091-0	ADJUSTER ARM (B)	1
46	4102-2092-0	ADJUSTER LINR (X)	1
47	4102-2071-0	GEAR LOCK ARM	1
48	4102-1942-0	DETECTOR GEAR	1
49	4102-1943-0	TU GUAR ARM ASSY	1
50	4102-2093-0	DETECTOR CAM ASSY	2
51	4102-2058-0	MUTE ARM (N)	1
52	4102-1626-0	TAPE HOOKER	1
53	4102-1633-0	IDLE PULLEY A	1
56	4102-2072-0	MOTOR PULLEY (ITY)	1
57	4102-1945-0	HP ROLLER (B)	1
58	4102-1946-0	FF ROLLER	1
59	4102-1947-0	COLLAR (SELECTOR GEAR)	1
60	4102-1948-0	HP ROLLER (A)	1
62	4102-2060-0	PROGRAM ROLLER	1
63	4102-2059-0	MUTE ARM COLLAR	1
64	4102-1950-0	FF/REW LEVER SPRING	2
65	4102-1951-0	LOCK LEVER SPG	1
66	4102-1952-0	GEAR LOCK ARM SPG	1

REF. NO.	PART NO.	DESCRIPTION	QTY
67	4102-1953-0	EJECT LEVER SPG	1
68	4102-1954-0	EJECT CAM SPG	1
69	4102-1955-0	HEAD PLATE SPG	1
70	4102-1956-0	EJECT CAM LOCK SPG	1
71	4102-1957-0	PROGRAM ARM SPG	1
72	4102-1958-0	ADJUSTER ARM SPG (A)	1
73	4102-1959-0	ADJUSTER ARM SPG (B)	1
74	4102-1960-0	PINCH ARM SPG(F)	1
75	4102-1961-0	PINCH ARM SPG (R)	1
76	4102-1962-0	RACHET SPG	1
77	4102-1963-0	DASH SPG	1
78	4102-2022-0	CENTER PLATE SPG (A)	1
79	4102-1965-0	CHANGING ARM SPG	1
80	4102-1966-0	EARTH SPG (R)	2
82	4102-2094-0	BACK TENTION SPG	2
85	4102-2095-0	SUB BELT (C)	1
86	4102-2096-0	SELECTER LINK (B)	1
87	4102-1970-0	MAIN BELT CDS36	1
89	4102-1971-0	RETURN LINK	1
90	4102-2049-0	MYLAR WASHER	1
92	4102-2097-0	MOTOR ASSY	1
93	4102-2098-0	MOTOR (EG-520ED-3B)	1
94	4102-1973-0	SW PWB	1
95	4102-1974-0	WIRE (A) BLACK 60MM	1
96	4102-1975-0	WIRE (B) RED 60MM	1
97	4102-1976-0	WIRE (C) YELLOW 55MM	1
98	4102-2099-0	ONE WAY HEAD (S-210-2)	1
99	4102-1620-0	POWER SWITCH	1
100	4102-1979-0	CDS36(3886) SLIDE SW	1
101	4102-2100-0	MUTE PWB	1
102	4102-2101-0	MUTE SW	1
103	4102-2102-0	CONNECTOR ASSY (SP)	1
105	4102-1980-0	E.RING M1.5 CDS36	3
106	4102-1504-0	STOP LING E-1.6X3.2XT0.3	2
107	4102-0686-0	E RING 2	1
111	4102-1511-0	POLY WASHER 1.2X3XT0.25	3
112	4102-1520-0	POLY WASHER 1.6X0.25	4
113	4102-1981-0	P.WASHER M2.1X3.2X0.25	2
114	4102-2104-0	MACHINE SCREW S-TITE PLAIN	2
116	4102-2105-0	+ MACHINE SCREW S-TITE PLAIN	1
117	4102-1984-0	MACHIN SCREW M2X3	5
118	4102-2063-0	+M.SCREW B-TITE FLAT#1 M2X4	1
119	4102-1986-0	MACHIN SCREW M2X4	1
120	4102-2065-0	+M.SCREW PLAIN #3 M2X7	2
121	4102-1987-0	MACHIN SCREW M2X2.5	2
122	4102-1988-0	MACHIN SCREW M2X4	1
123	4102-1989-0	MACHIN SCREW M2X3	1
124	4102-2106-0	AEMUTH SCREW	3
125	4102-2066-0	EJECT HOOK SCREW M2X5	2
126	4102-2107-0	LMW (RED) 2.1X3.5X0.05	2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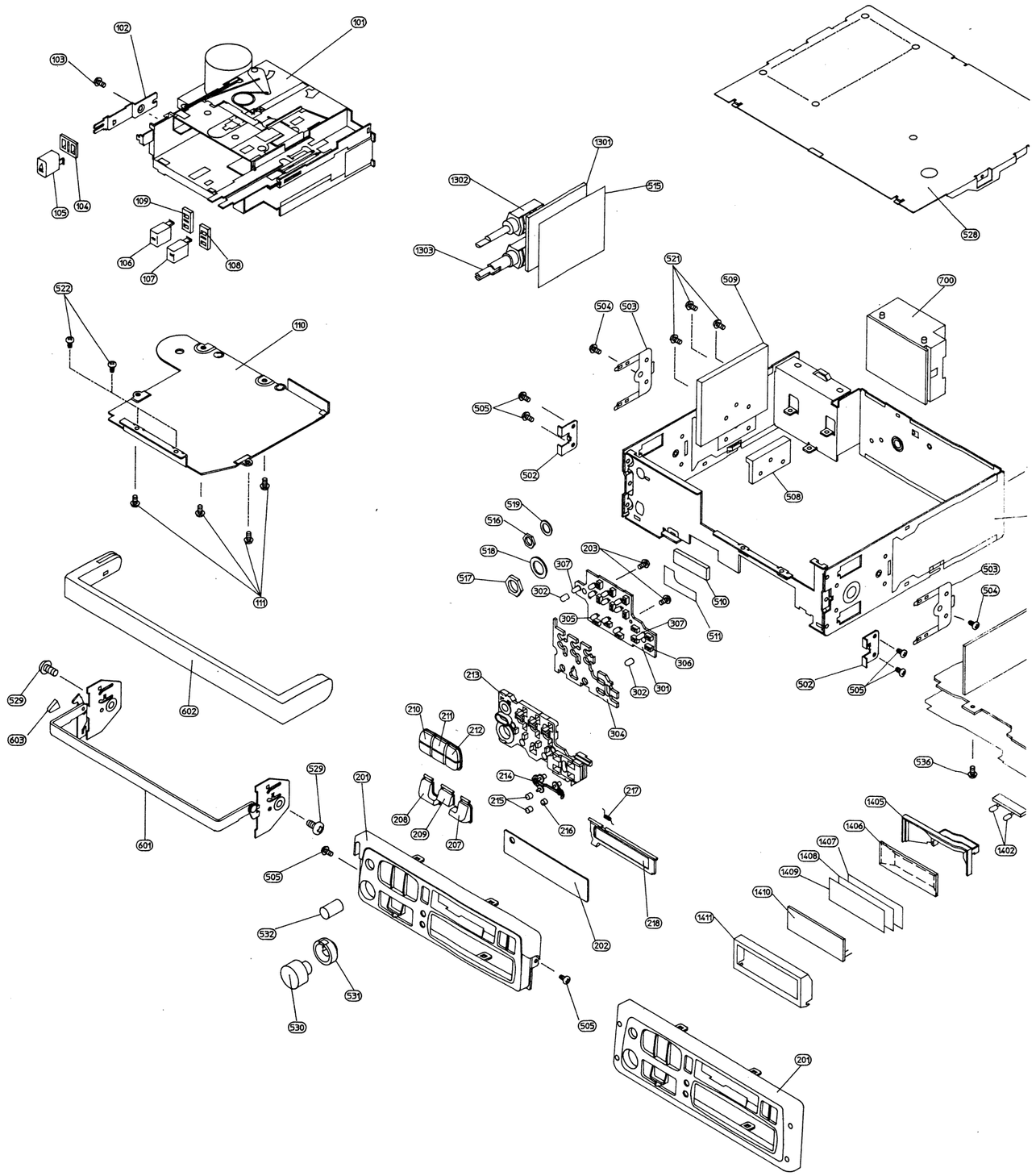
CR27, 28, 37, 38

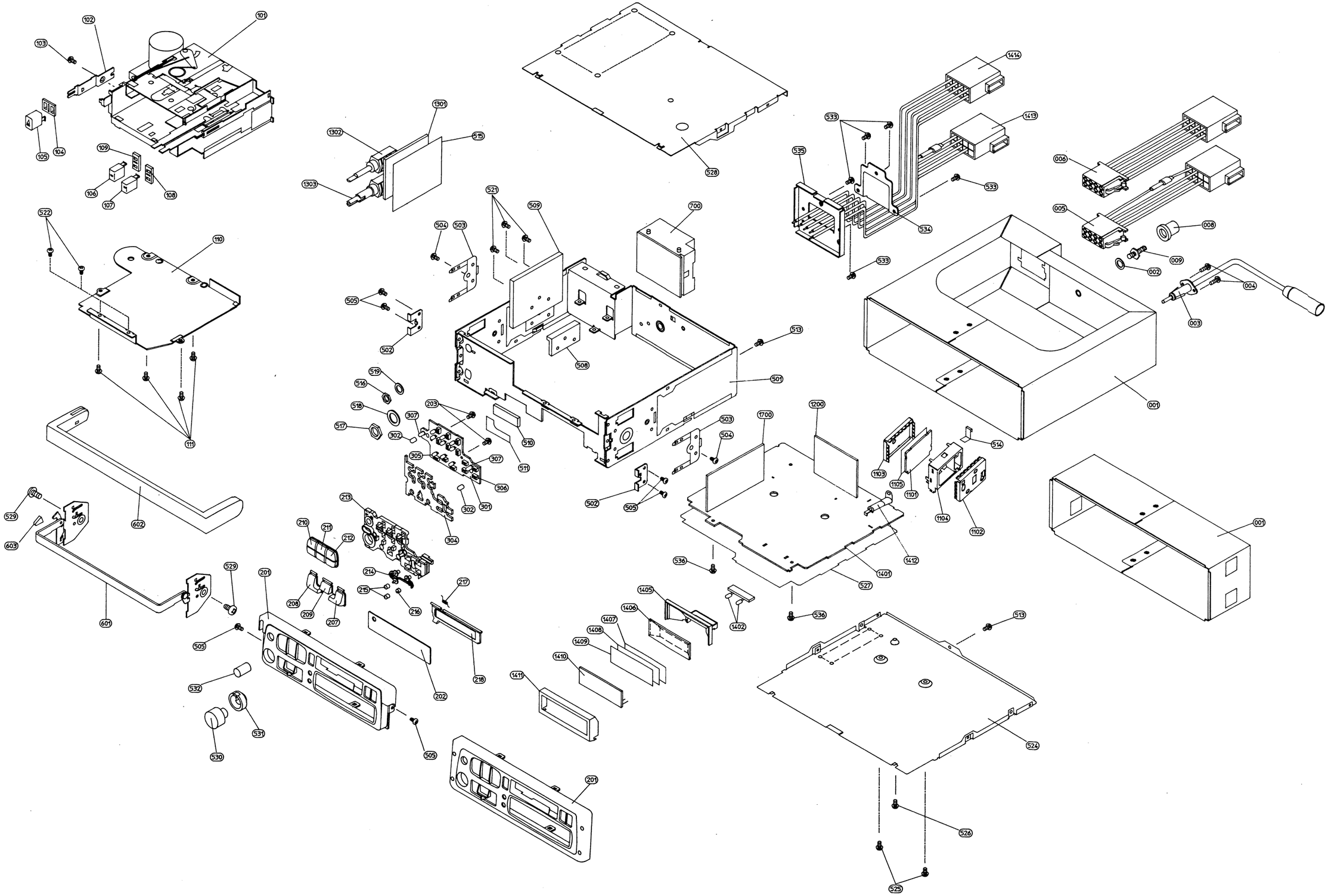
■ EXPLODED VEIW • PARTS LIST:

☐ Main section

NO.	PART NO.	DESCRIPTION	QTY
CRN27, CRN28, CRN37, CRN38			
101	4101-3801-0	CDS-36S	1
102	4131-8571-0	EJECTOR LEVER	1
103	2804-2632-0	M.SCREW PH M2.6X3	1
104	2434-3301-0	KNOB-ADAPTOR EJECTOR	1
105	2434-2501-0	KNOB-EJECT	1
106	2434-2701-0	KNOB-REW	1
107	2434-2601-0	KNOB-FF	1
108	2434-3401-0	KNOB-ADAPTOR FF	1
109	2434-3201-0	KNOB-ADAPTOR REW	1
110	4131-8511-0	BKT-DECK MTG	1
111	2815-2642-0	SCREW-M BH M2.6X4	4
203	2808-2082-0	SCREW TAP PH2X8	2
207	2434-2911-0	KNOB-TUNE UP	1
208	2434-3011-0	KNOB-TUNE DOWN	1
209	2434-3111-0	KNOB-TM	1
210	2434-2211-0	KNOB-STATION 1.4	1
211	2434-2311-0	KNOB-STATION 2.5	1
212	2434-2411-0	KNOB-STATION 3.6	1
213	3713-5011-0	LENS-LIGHTING	1
214	2434-280A-0	ADAPTOR FUNCTION KNOB	1
215	2434-3501-0	KNOB-FUNCTION PS/AS BAND	2
217	2510-1401-0	SPRING DOOR	1
301	1710-9221-0	PCB-KEY	1
304	1454-1281-0	SHIELD PLATE	1
307	2450-0126-0	DL 14V 40MA 3X6	2
505	2807-2642-0	SCREW-ST. CH M2.6X4	4
508	4131-8541-0	BKT-IC MTG	1
509	5400-0491-0	HEAT SINK	1
510	4151-8271-0	SPONGE	1
511	3100-2791-0	INSULATION SHT	1
513	2809-2642-0	ST SCREW PH M2.6X4	1
514	4131-8821-0	GROUND PLATE	1
516	2832-7751-0	NUT-HEX LOCK	1
517	2832-9751-0	NUT 9X0.75X2X11	1
518	2841-9142-0	WASHER AL ID9XOD14X0.5T	1
519	2841-7122-0	WASHER ALUM.	1
521	2815-2682-0	M,.SCREW 2.6X8 BT	3
522	2821-2642-0	SCREW-ST PH M2.6X4	2
524	1402-1290-0	BOTTOM COVER	1
525	2805-2652-0	M SCREW 2.6X0.45X5X5.8	2
526	2809-2682-0	SCREW-ST 2.6X8	1
527	3100-2761-0	FIBRE SHEET	1
528	1402-1280-0	TOP COVER	1
530	2434-2001-0	VOL. KNOB	1
531	2434-2101-0	FADER KNOB	1
532	2434-1901-0	TONE KNOB	1
536	2809-2652-4	SCREW-ST PH 2.6X5	2
1101	1710-2291-2	PCB-FM TUNER	1
1102	1454-0321-4	FM SHIELD COVER	1
1103	1454-0291-1	FM SHIELD COVER	1
1104	1454-0701-0	FM TUNER SHIELD BKT	1
1105	3100-0511-0	INSULATION SHEET	1
1200	MI-8231-10-S	AM TUNER ASSEMBLY	1
1302	4750-2897-0	VR-TONE	1
1303	4750-3107-0	VR-VL SW//LB;SF//;L8B	1
1401	1710-9191-0	PCB-MAIN	1
1402	2450-0126-0	DL 14V 40MA 3X6	2
1405	4151-8081-0	HOLDER-LCD	1
1406	3713-5411-0	LIGHT DIFFUSER	1
1407	3713-5811-0	TRANSFLECTOR SHEET	1
1409	4151-8172-0	FILTER "TEXTURE"	1
1410	2460-0710-0	DISPLAY LCD	1
1411	4131-8601-0	COVER-LCD	1
1412	2107-0461-0	ANTENNA BUSH	1
CRN37			
001	8900-0580-0	SLEEVE LONG	1
002	2842-5122-1	MS WASHER '106-5' SR300F	1
003	2107-0431-0	ANTENNA SOCKET	1
004	2815-2642-0	SCREW-M BH M2.6X4	2
005	7008-8781-0	POWER WIRE ASSY	1
006	7008-8771-0	SPEAKER WIRE ASSY	1
008	4151-0451-2	RUBBER BUSH	1
009	4131-8591-0	STUD	1
201	1460-9512-0	F.HOUSING CK1E	1
202	3713-5511-0	LENS-DIAL CK1E	1
216	2434-3601-0	KNOB-FUNCTION VF	1
218	4140-7011-0	CASS DOOR CK1E	1
302	4150-7401-0	LAMP COVER 'YELLOW' 8309	2
305	3700-2320-Y	LED SP 3.0X6.0 L0.5 YL	9
306	5200-0881-0-01	TACT SWITCH 260GMF	12
501	8900-0570-0	MIDDLE CHASSIS ASSY	1
515	3100-1591-0	INSULATION SHEET	1
529	2825-5062-0	SCREW M5.0X6	2
601	8900-0560-0	HANDLE ASSY	1
602	1460-9801-0	HANDLE COVER CRN37,38	1
603	2434-1801-0	KNOB-HANDLE EJECTOR	1
700	SCA-J0100C	CONNECTOR ASSY	1
1408	4151-8174-0	104 DEEP AMBER	1
1700	MI-9271-01-S	SDK VF ASSEMBLY	1
CRN38			
001	8900-0580-0	SLEEVE LONG	1
002	2842-5122-1	MS WASHER '106-5' SR300F	1
003	2107-0431-0	ANTENNA SOCKET	1
004	2815-2642-0	SCREW-M BH M2.6X4	2
005	7008-8781-0	POWER WIRE ASSY	1
006	7008-8771-0	SPEAKER WIRE ASSY	1
008	4151-0451-2	RUBBER BUSH	1
009	4131-8591-0	STUD	1
201	1460-9512-0	F.HOUSING CK1E	1
202	3713-5111-0	LENS-DIAL	1
218	4140-7012-0	CASS DOOR CK1B/E	1
306	5200-0881-0-01	TACT SWITCH 260GMF	11
501	8900-0570-0	MIDDLE CHASSIS ASSY	1
529	2825-5062-0	SCREW M5.0X6	2
601	8900-0560-0	HANDLE ASSY	1
602	1460-9801-0	HANDLE COVER CRN37,38	1
603	2434-1801-0	KNOB-HANDLE EJECTOR	1
700	SCA-J0100C	CONNECTOR ASSY	1
Green lighting			
302	4150-1206-0	GREEN LAMP CAP	2
305	3700-7499-G	LED 3.0X6.0 L0.5 GREEN	9
1408	4151-8173-0	122 FERN GREEN	1
Amber lighting			
302	4150-7401-0	LAMP COVER 'YELLOW' 8309	2
305	3700-2320-Y	LED SP 3.0X6.0 L0.5 YL	9
1408	4151-8174-0	104 DEEP AMBER	1

NO.	PART NO.	DESCRIPTION	QTY
CRN27			
001	8900-0590-0	SLEEVE SHORT	1
201	1460-9612-0	FRONT HOUSING CKN27	1
202	3713-5511-0	LENS-DIAL CK1E	1
216	2434-3601-0	KNOB-FUNCTION VF	1
218	4140-7013-0	CASS DOOR CRN27	1
302	4150-7401-0	LAMP COVER 'YELLOW' 8309	2
305	3700-2320-Y	LED SP 3.0X6.0 L0.5 YL	9
306	5200-0881-0-01	TACT SWITCH 260GMF	12
501	8900-0620-0	MIDDLE CHASSIS ASSY	1
502	4131-8691-0	STOP PLATE	2
503	2150-2001-0	SIDE LOCKER	2
504	2806-2642-1	M SCREW 2.6X0.45X4X5	4
515	3100-1591-0	INSULATION SHEET	1
533	2815-2652-0	M SCREW BH M2.6X5	5
534	4131-7641-0	COVER-WIRE	1
535	4131-7631-2	BKT BACK MTG	1
1408	4151-8174-0	104 DEEP AMBER	1
1413	7008-8801-0	PWR WIRE ASSY	1
1414	7008-8791-0	SPK WIRE ASSY	1
1700	MI-9271-01-S	SDK VF ASSEMBLY	1
CRN28 Parts only			
001	8900-0590-0	SLEEVE SHORT	1
201	1460-9612-0	FRONT HOUSING CKN27	1
202	3713-5111-0	LENS-DIAL	1
218	4140-7014-0	CASS DOOR CRN28	1
302	4150-7401-0	LAMP COVER 'YELLOW' 8309	2
305	3700-2320-Y	LED SP 3.0X6.0 L0.5 YL	9
306	5200-0881-0-01	TACT SWITCH 260GMF	11
501	8900-0620-0	MIDDLE CHASSIS ASSY	1
502	4131-8691-0	STOP PLATE	2
503	2150-2001-0	SIDE LOCKER	2
504	2806-2642-1	M SCREW 2.6X0.45X4X5	2
533	2815-2652-0	M SCREW BH M2.6X5	5
534	4131-7641-0	COVER-WIRE	1
535	4131-7631-2	BKT BACK MTG	1
1408	4151-8174-0	104 DEEP AMBER	1
1413	7008-8801-0	PWR WIRE ASSY	1
1414	7008-8791-0	SPK WIRE ASSY	1

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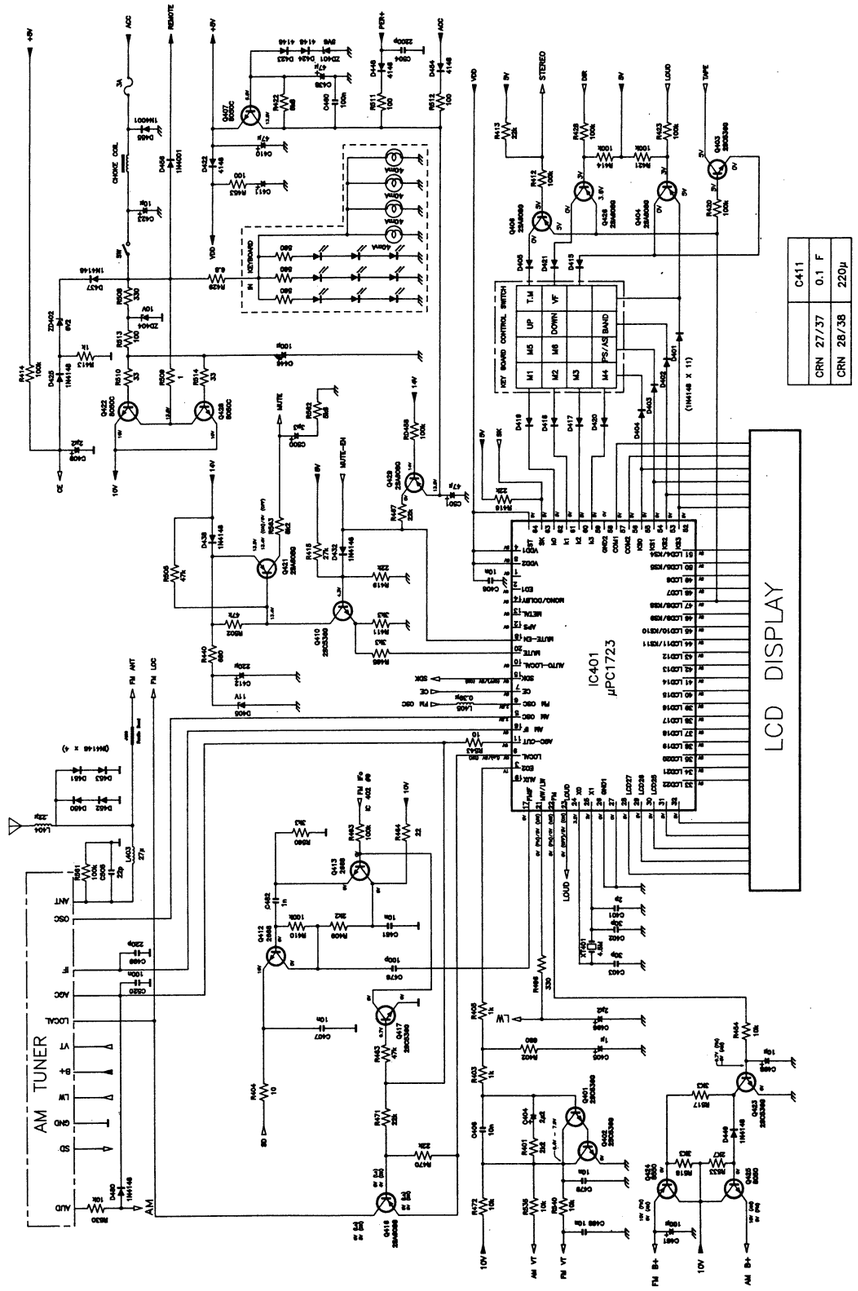
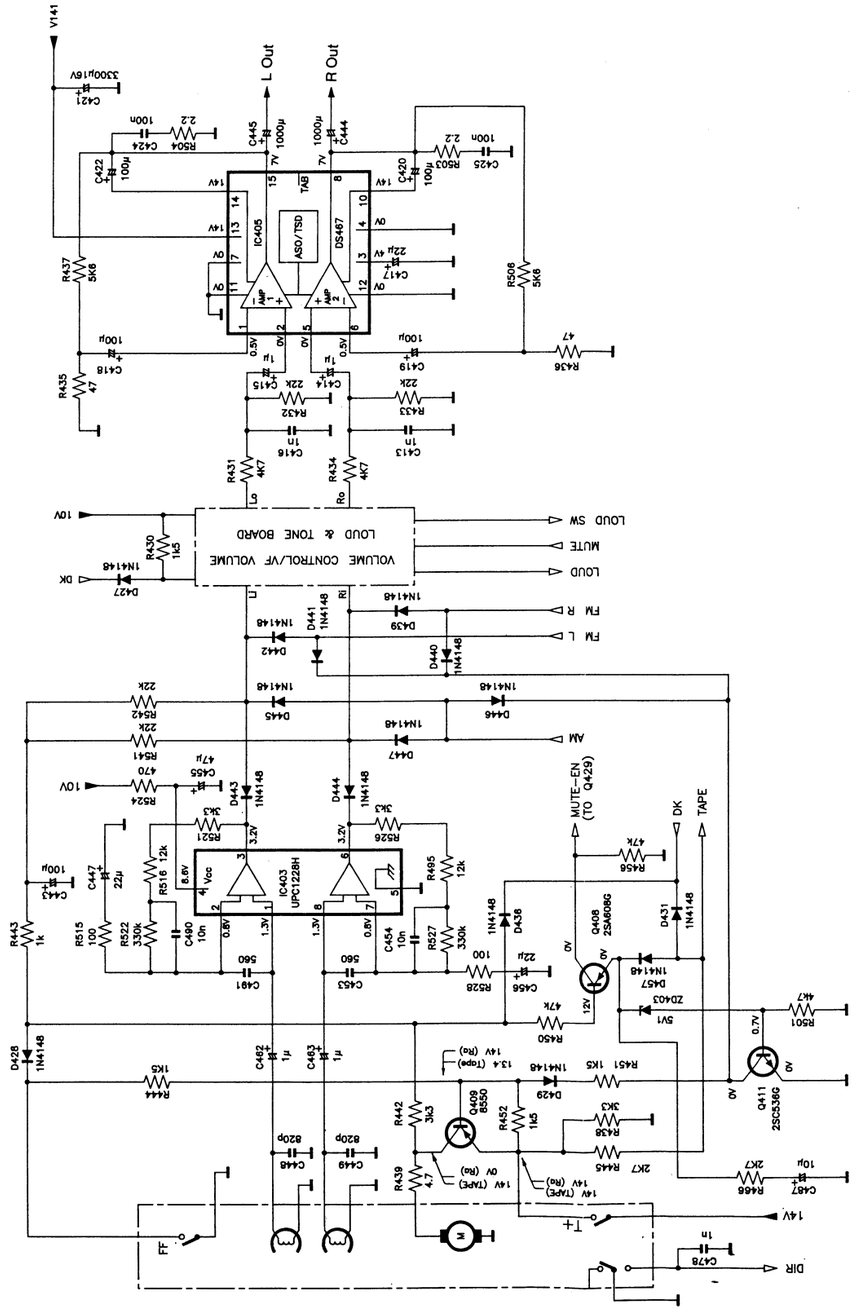
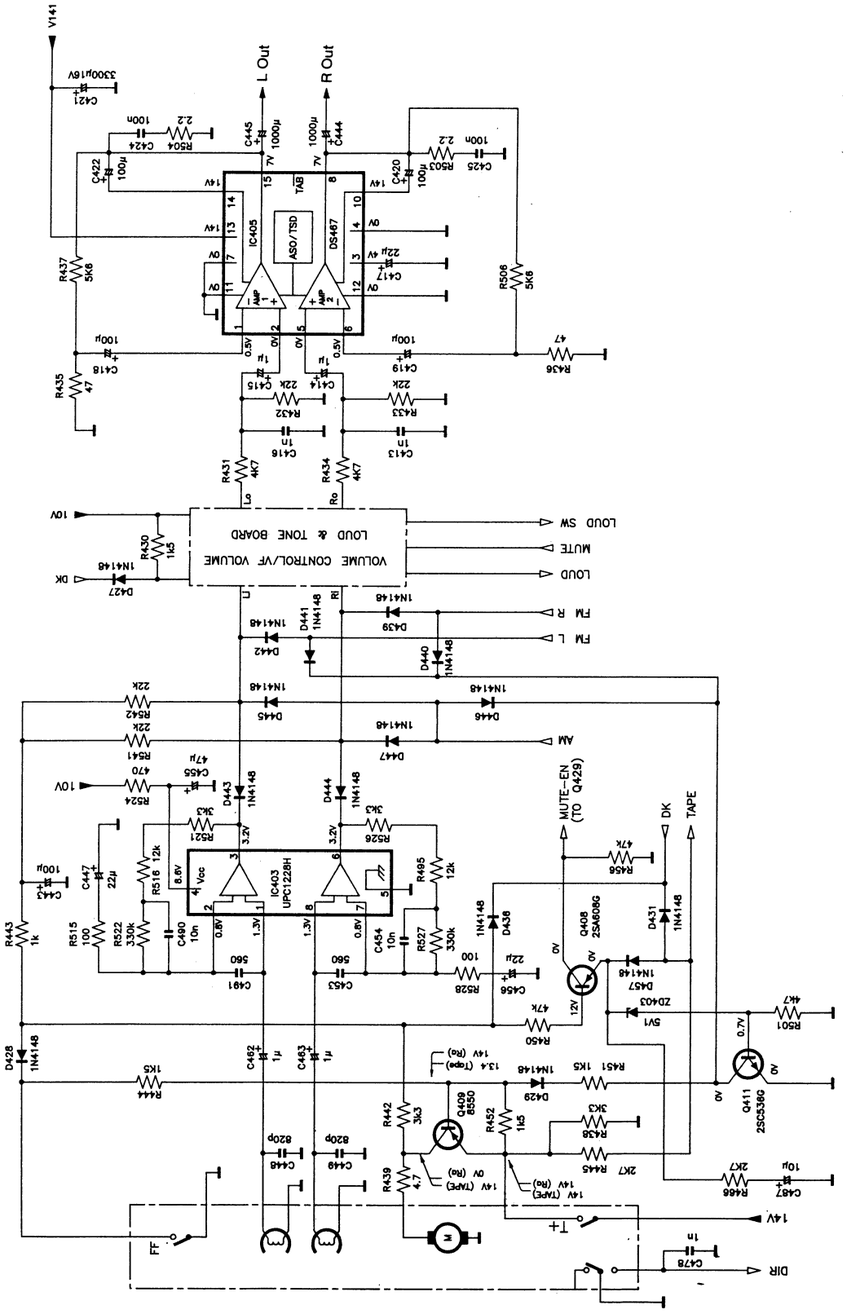
CIRCUIT DIAGRAM: MAIN - DTS & SWITCHING



CIRCUIT DIAGRAM: MAIN - AUDIO (CRN27, CRN37)

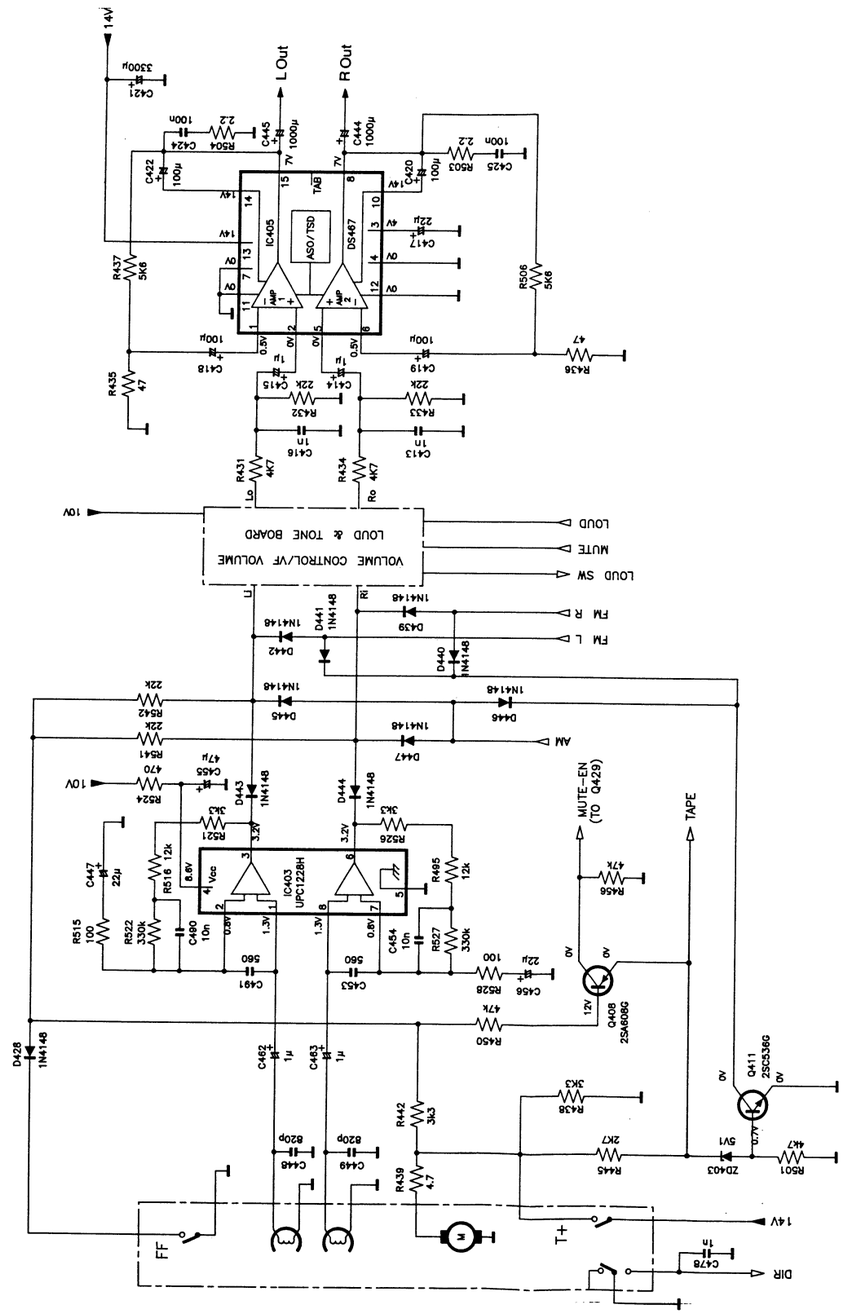


CIRCUIT DIAGRAM: MAIN - AUDIO (CRN27, CRN37)

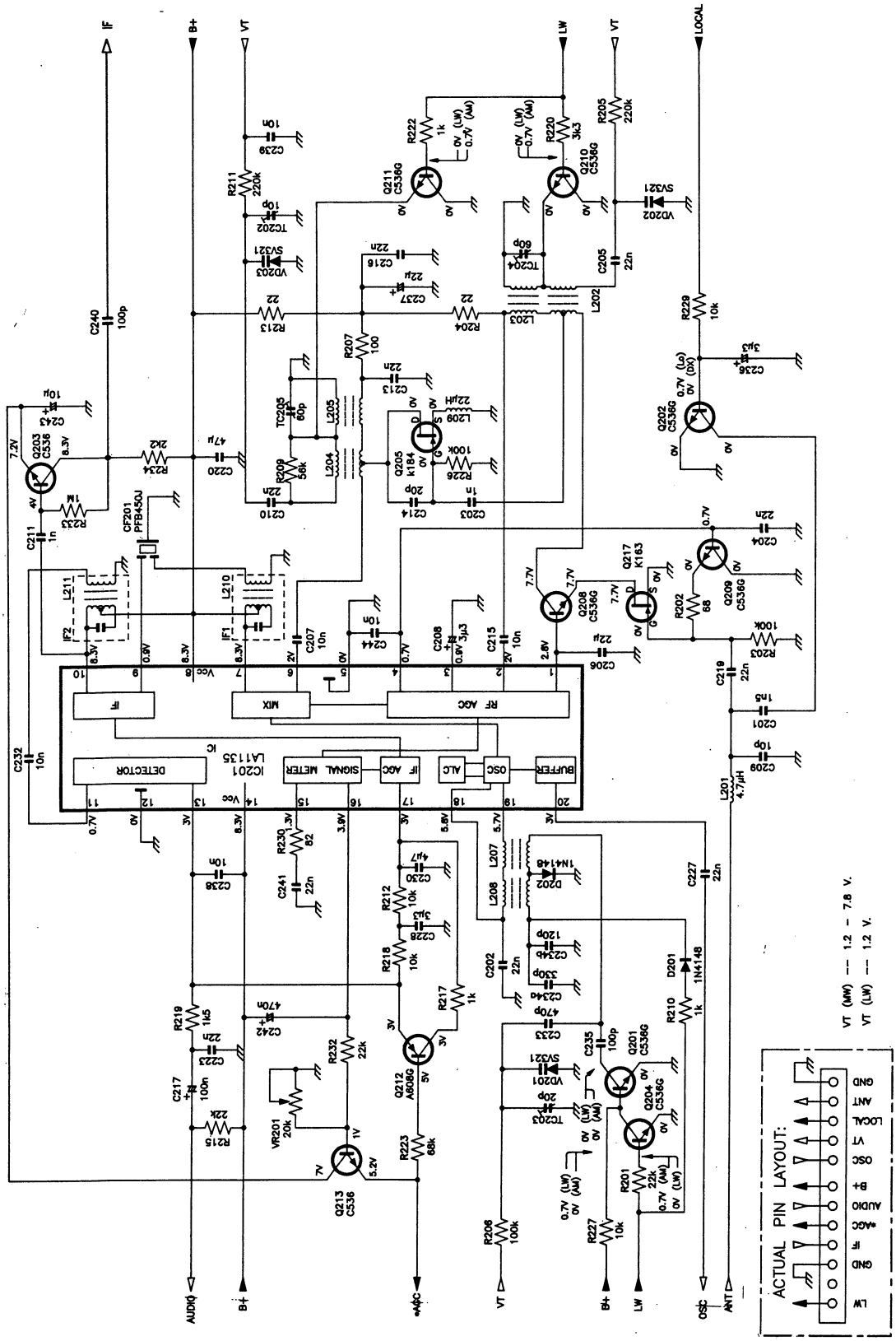


CRN27, 28, 37, 38

CIRCUIT DIAGRAM: MAIN - AUDIO (CRN28, CRN38)

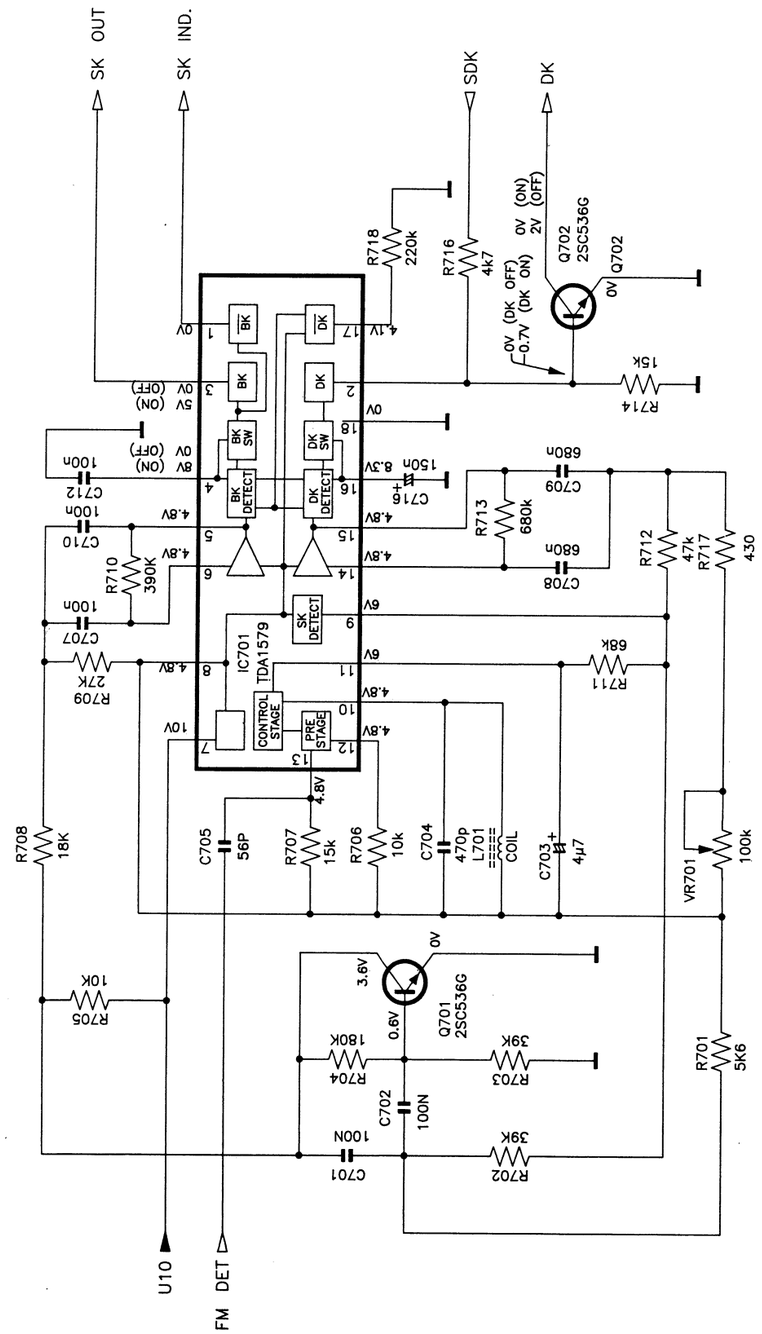


CIRCUIT DIAGRAM: AM BOARD

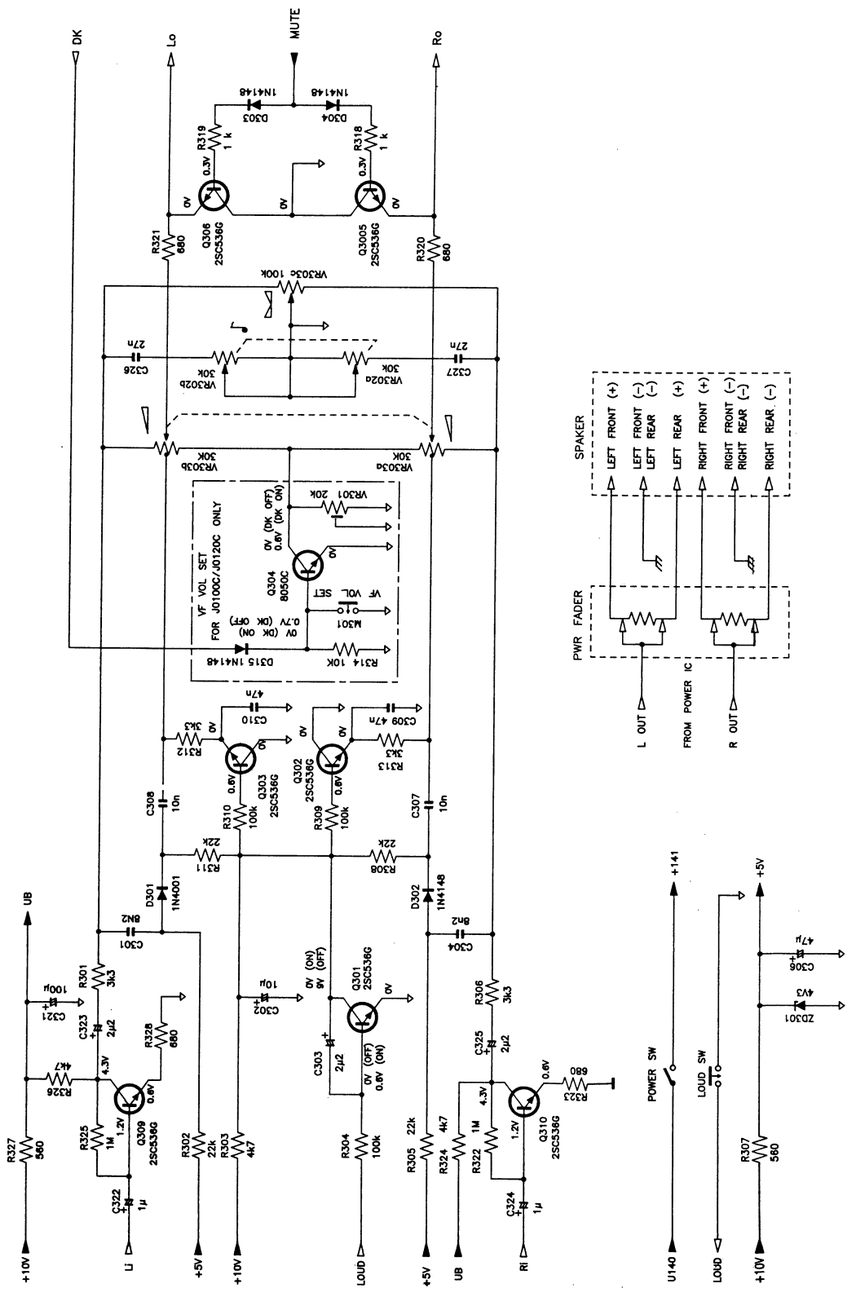


■ CIRCUIT DIAGRAM: FM BOARD

CIRCUIT DIAGRAM: VF BOARD

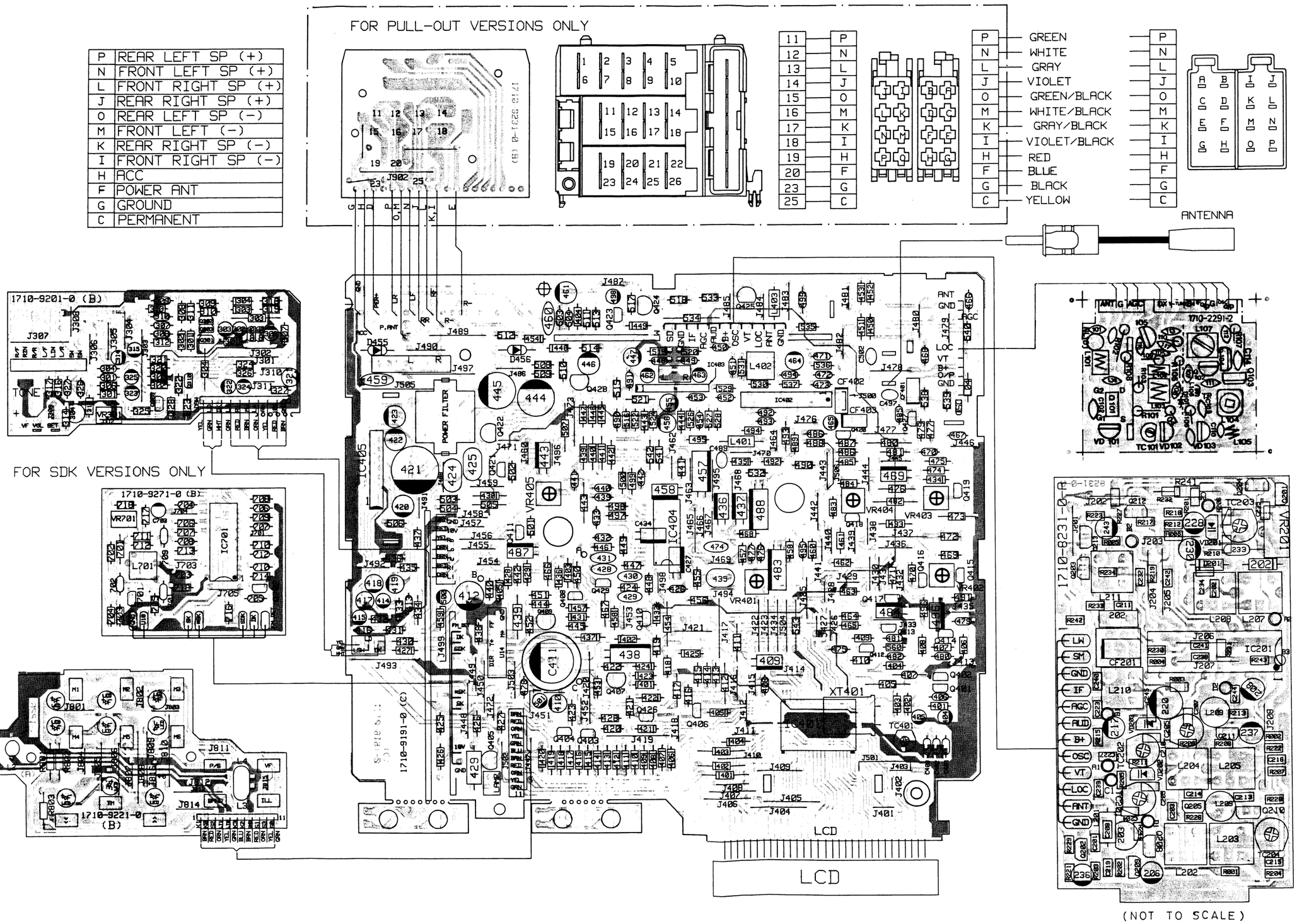


CIRCUIT DIAGRAM: VOLUME CONTROL BOARD



■ PRINTED CIRCUIT BOARDS - WIRING DIAGRAM

P	REAR LEFT SP (+)
N	FRONT LEFT SP (+)
L	FRONT RIGHT SP (+)
J	REAR RIGHT SP (+)
O	REAR LEFT SP (-)
M	FRONT LEFT (-)
K	REAR RIGHT SP (-)
I	FRONT RIGHT SP (-)
H	ACC
F	POWER ANT
G	GROUND
C	PERMANENT



■ PARTS LIST:

☐ Electrical section

NO.	PART NO.	DESCRIPTION
CRN27, CRN28, CRN37, CRN38 MAIN BOARD		
C401	15CH-020C-5-GG	CTC 0/60 2pF ±0.25
C402	15CH-300J-5-IG	CTC 0/60 30pF ±5%
C403	15CH-300J-5-IG	CTC 0/60 30pF ±5%
C404	154D-225M-5-HM	CT 16V 2.2μF ±20%
C405	154E-105M-5-HM	CT 25V 1μF ±20%
C406	150D-103M-2-FC	CC 16V 0.01μF ±20%
C407	150D-103M-2-FC	CC 16V 0.01μF ±20%
C408	150D-103M-2-FC	CC 16V 0.01μF ±20%
C409	157F-225M-5-GM	CE 50V 2.2μF ±20%
C410	157D-476M-5-KM	CE 16V 47μF ±20%
C412	157D-227M-5-OW	CE 16V 220μF ±20%
C413	150F-102K-2-FC	CC 50V 1000pF ±10%
C414	157F-105M-5-GM	CE 50V 1μF ±20%
C415	157F-105M-5-GM	CE 50V 1μF ±20%
C416	150F-102K-2-FC	CC 50V 1000pF ±10%
C417	157D-226M-5-IM	CE 16V 22μF ±20%
C418	157C-107M-5-IU	CE 10V 100μF ±20%
C419	157C-107M-5-KM	CE 16V 100μF ±20%
C420	157C-107M-5-IU	CE 10V 100μF ±20%
C421	157D-338M-5-W9	CE 16V 3300μF ±20%
C422	157C-107M-5-IU	CE 10V 100μF ±20%
C423	157D-106M-5-IU	CE 16V 10μF ±20%
C424	153F-104K-5-PT	CM 50V 0.1μF ±10%
C425	153F-104K-5-PT	CM 50V 0.1μF ±10%
C426	150D-682M-2-FC	CC 16V 6800pF ±20%
C427	157F-224M-5-GM	CE 50V 0.22μF ±20%
C428	150E-473M-5-OG	CC 25V 0.047μF ±20%
C429	150D-223M-5-MG	CC 16V 0.022μF ±20%
C430	150E-473M-5-OG	CC 25V 0.047μF ±20%
C431	150E-333M-5-OG	CC 25V 0.033μF ±20%
C432	150D-332M-2-FC	CC 16V 3300pF ±20%
C433	150D-103M-2-FC	CC 16V 0.01μF ±20%
C434	157F-475M-5-GM	CE 50V 4.7μF ±20%
C436	150E-683K-5-OG	CC 25V 0.068μF ±10%
C437	157F-224M-5-GM	CE 50V 0.22μF ±20%
C438	157D-476M-5-IU	CE 16V 47μF ±20%
C439	153F-153K-5-KP	CM 50V 0.015μF ±10%
C440	153F-153K-5-KP	CM 50V 0.015μF ±10%
C441	150F-561K-2-FC	CC 50V 560pF ±10%
C442	150F-561K-2-FC	CC 50V 560pF ±10%
C443	157C-107M-5-IU	CE 10V 100μF ±20%
C444	157C-108M-5-S5	CE 10V 1000μF ±20%
C445	157C-108M-5-S5	CE 10V 1000μF ±20%
C446	157D-107M-5-KW	CE 16V 100μF ±20%
C447	157D-226M-5-IM	CE 16V 22μF ±20%
C448	150F-821K-2-FC	CC 50V 820pF ±10%
C449	150F-821K-2-FC	CC 50V 820pF ±10%
C450	150D-104M-5-OG	CC 16V 0.1μ ±20%
C451	150D-223M-5-MG	CC 16V 0.022μF ±20%
C452	150F-390K-5-GG	CC 50V 39pF ±5%
C453	150F-561K-2-FC	CC 50V 560pF ±10%
C454	153F-103K-5-KM	CM 50V 0.01μF ±10%
C455	157D-476M-5-IU	CE 16V 47μF ±20%
C456	157D-226M-5-IM	CE 16V 22μF ±20%
C457	157C-107M-5-IU	CE 10V 100μF ±20%
C458	157F-335M-5-GM	CE 50V 3.3μF ±20%
C459	153F-104K-5-PT	CM 50V 0.1μF ±10%
C460	153F-104K-5-PT	CM 50V 0.1μF ±10%
C461	157C-107M-5-IU	CE 10V 100μF ±20%
C462	154E-105M-5-HM	CT 25V 1μF ±20%
C463	154E-105M-5-HM	CT 25V 1μF ±20%

NO.	PART NO.	DESCRIPTION
C464	157D-226M-5-IM	CE 16V 22μF ±20%
C465	157F-475M-5-GM	CE 50V 4.7μF ±20%
C466	150D-103M-2-FC	CC 16V 0.01μF ±20%
C467	150D-103M-2-FC	CC 16V 0.01μF ±20%
C468	150D-103M-2-FC	CC 16V 0.01μF ±20%
C469	157D-476M-5-IU	CE 16V 47μF ±20%
C470	150D-103M-2-FC	CC 16V 0.01μF ±20%
C471	150D-223M-5-MG	CC 16V 0.022μF ±20%
C472	150D-223M-5-MG	CC 16V 0.022μF ±20%
C473	150D-223M-5-MG	CC 16V 0.022μF ±20%
C474	150D-223M-5-MG	CC 16V 0.022μF ±20%
C475	150F-101K-2-FC	CC 50V 100pF ±10%
C476	15UJ-331J-5-TE	CTC 750/120 330pF ±5%
C477	150F-101K-2-FC	CC 50V 100pF ±10%
C478	150D-222M-2-FC	CC 16V 2200pF ±20%
C479	150D-103M-2-FC	CC 16V 0.01μF ±20%
C481	150D-103M-2-FC	CC 16V 0.01μF ±20%
C482	150F-102K-2-FC	CC 50V 1000pF ±10%
C483	157F-225M-5-GM	CE 50V 2.2μF ±20%
C484	157D-106M-5-GM	CE 16V 10μF ±20%
C485	150D-103M-2-FC	CC 16V 0.01μF ±20%
C486	150F-470J-5-IF	CC 50V 47pF ±5%
C488	157F-474M-5-GM	CE 50V 0.47μF ±20%
C489	150F-390K-5-GG	CC 50V 39pF ±5%
C490	153F-103K-5-KM	CM 50V 0.01μF ±10%
C491	150F-561K-2-FC	CC 50V 560pF ±10%
C492	150D-104M-5-OG	CC 16V 0.1μ ±20%
C493	150D-104M-5-OG	CC 16V 0.1μ ±20%
C494	150D-223M-5-MG	CC 16V 0.022μF ±20%
C495	150D-472M-2-FC	CC 16V 4700pF ±20%
C496	157F-225M-5-GM	CE 50V 2.2μF ±20%
C498	157D-106M-5-GM	CE 16V 10μF ±20%
C499	150F-221K-2-FC	CC 50V 220pF ±10%
C501	157E-476M-5-IU	CE 25V 47μF ±20%
C500	157F-335M-5-GM	CE 50V 3.3μF ±20%
C502	1801-R22M-M	Ferrite Inductor 0.22μH ±20%
C504	153F-222K-5-KW	CM 50V 2200pF ±10%
C505	150F-220K-5-GG	CC 50V 22pF ±10%
C506	150D-222M-2-FC	CC 16V 2200pF ±20%
CF401	2701-0116-1	CF SFE10.7MS3Z
CF402	2701-0116-1	CF SFE10.7MS3Z
CF403	2701-0116-1	CF SFE10.7MS3Z
D401	4804-1480-2	Diode 1N4148
D402	4804-1480-C	Diode 1N4148
D403	4804-1480-C	Diode 1N4148
D404	4804-1480-C	Diode 1N4148
D405	4804-1480-C	Diode 1N4148
D406	4804-1480-C	Diode 1N4148
D412	4804-1480-2	Diode 1N4148
D413	4804-1480-2	Diode 1N4148
D414	4804-1480-2	Diode 1N4148
D415	4804-1480-2	Diode 1N4148
D416	4804-1480-2	Diode 1N4148
D417	4804-1480-2	Diode 1N4148
D418	4804-1480-2	Diode 1N4148
D419	4804-1480-2	Diode 1N4148
D420	4804-1480-2	Diode 1N4148
D421	4804-1480-2	Diode 1N4148
D422	4804-1480-2	Diode 1N4148
D423	4804-1480-2	Diode 1N4148
D424	4804-1480-2	Diode 1N4148
D425	4804-1480-2	Diode 1N4148
D432	4804-1480-2	Diode 1N4148
D434	4804-1480-2	Diode 1N4148

NO.	PART NO.	DESCRIPTION
D435	4804-1480-2	Diode 1N4148
D438	4804-1480-2	Diode 1N4148
D439	4804-1480-2	Diode 1N4148
D440	4804-1480-2	Diode 1N4148
D441	4804-1480-2	Diode 1N4148
D442	4804-1480-2	Diode 1N4148
D443	4804-1480-2	Diode 1N4148
D444	4804-1480-2	Diode 1N4148
D445	4804-1480-2	Diode 1N4148
D446	4804-1480-2	Diode 1N4148
D447	4804-1480-2	Diode 1N4148
D448	4804-1480-2	Diode 1N4148
D449	4804-1480-2	Diode 1N4148
D450	4701-104J-C	RCF 1/8W 100k ±5%
D451	4804-1480-2	Diode 1N4148
D452	4804-1480-2	Diode 1N4148
D453	4804-1480-2	Diode 1N4148
D454	4804-1480-2	Diode 1N4148
D455	4804-0010-1	Diode 1N4001 AL
D456	4804-0010-1	Diode 1N4001 AL
D458	4701-104J-C	RCF 1/8W 100k ±5%
D480	4804-1480-2	Diode 1N4148
IC401	3130-2700-0	IC-NEC 1723
IC402	3130-0390-0	IC LA1140
IC403	3130-0620-0	IC UPC1228HA
IC404	3130-2560-0	IC AN7465
IC405	3130-2690-0	IC-HA13119
L04	1801-R39K-M	Coil 0.39µH,10%,AL,BLT
L101	1806-0031-0	Coil DC Choke
L401	1801-4R7K-M	Coil 4.7µH ±10%
L402	5600-0726-0	10.7M F292ACA-A0528ZH
L403	1801-2R2M-M	Coil 20µH,20%,AL,BLT
L480	1808-0050-0	Ferrite Bead
Q401	485C-536G-5	TR 2SC536G
Q402	485C-536G-5	TR 2SC536G
Q403	485C-536G-5	TR 2SC536G
Q404	485A-608F-5	TR 2SA608F
Q406	485A-608F-5	TR 2SA608F
Q407	4860-0050-5	TR 8050 C/D KEC
Q408	485A-608F-5	TR 2SA608F
Q410	485C-536G-5	TR 2SC536G
Q411	485C-536G-5	TR 2SC536G
Q412	4852-668O-5	TR 2SC2668-O
Q413	4852-668O-5	TR 2SC2668-O
Q415	485C-536G-5	TR 2SC536G
Q416	485A-608F-5	TR 2SA608F
Q417	485C-536G-5	TR 2SC536G
Q418	485C-536G-5	TR 2SC536G
Q419	485C-536G-5	TR 2SC536G
Q420	485C-536G-5	TR 2SC536G
Q421	485A-608F-5	TR 2SA608F
Q422	4858-050C-5	TR JE8050C
Q423	485C-536G-5	TR 2SC536G
Q424	4860-0060-5	TR 8550 C/D KEC
Q425	4860-0050-5	TR 8050 C/D KEC
Q426	485A-608F-5	TR 2SA608F
Q427	4852-668O-5	TR 2SC2668-O
Q428	4858-050C-5	TR JE8050C
Q429	485A-608G-5	TR 2SA608G
R401	4701-222J-C	RCF 1/8W 2.2k ±5%
R402	4701-681J-C	RCF 1/8W 680Ω ±5%
R403	4701-102J-C	RCF 1/8W 1k ±5%
R404	4701-100J-C	RCF 1/8W 10Ω ±5%
R405	4701-102J-C	RCF 1/8W 1k ±5%
R409	4701-222J-C	RCF 1/8W 2.2k ±5%
R410	4701-104J-C	RCF 1/8W 100k ±5%
R411	4701-332J-C	RCF 1/8W 3.3k ±5%
R412	4701-104J-C	RCF 1/8W 100k ±5%
R413	4701-223J-C	RCF 1/8W 22k ±5%
R414	4701-104J-C	RCF 1/8W 100k ±5%

NO.	PART NO.	DESCRIPTION
R415	4701-273J-C	RCF 1/8W 27k ±5%
R417	4701-332J-C	RCF 1/8W 3.3k ±5%
R418	4701-152J-C	RCF 1/8W 1.5k ±5%
R419	4701-223J-C	RCF 1/8W 22k ±5%
R420	4701-104J-C	RCF 1/8W 100k ±5%
R421	4701-104J-C	RCF 1/8W 100k ±5%
R422	4701-682J-C	RCF 1/8W 6.8k ±5%
R423	4701-104J-C	RCF 1/8W 100k ±5%
R427	4701-104J-C	RCF 1/8W 100k ±5%
R428	4701-104J-C	RCF 1/8W 100k ±5%
R429	4707-6R8J-2	RCF 1/2W 6.8Ω ±5%
R431	4701-472J-C	RCF 1/8W 4.7k ±5%
R432	4701-223J-C	RCF 1/8W 22k ±5%
R433	4701-223J-C	RCF 1/8W 22k ±5%
R434	4701-472J-C	RCF 1/8W 4.7k ±5%
R435	4701-470J-C	RCF 1/8W 47Ω ±5%
R436	4701-470J-C	RCF 1/8W 47Ω ±5%
R437	4701-562J-C	RCF 1/8W 5.6k ±5%
R438	4701-332J-C	RCF 1/8W 3.3k ±5%
R439	4705-4R7J-2	RCF 1/4W 4.7Ω ±5%
R440	4701-681J-C	RCF 1/8W 680Ω ±5%
R442	4701-332J-C	RCF 1/8W 3.3k ±5%
R443	4701-102J-C	RCF 1/8W 1k ±5%
R445	4701-272J-C	RCF 1/8W 2.7k ±5%
R446	4701-752J-C	RCF 1/8W 7.5k ±5%
R447	4701-152J-C	RCF 1/8W 1.5k ±5%
R448	4701-102J-C	RCF 1/8W 1k ±5%
R449	4701-564J-C	RCF 1/8W 560k ±5%
R450	4701-473J-C	RCF 1/8W 47k ±5%
R453	4701-101J-C	RCF 1/8W 100Ω ±5%
R454	4701-103J-C	RCF 1/8W 10k ±5%
R455	4701-473J-C	RCF 1/8W 47k ±5%
R456	4701-473J-C	RCF 1/8W 47k ±5%
R457	4701-103J-C	RCF 1/8W 10k ±5%
R458	4701-472J-C	RCF 1/8W 4.7k ±5%
R459	4701-822J-C	RCF 1/8W 8.2k ±5%
R460	4701-472J-C	RCF 1/8W 4.7k ±5%
R461	4701-153J-C	RCF 1/8W 15k ±5%
R463	4701-473J-C	RCF 1/8W 47k ±5%
R464	4701-220J-C	RCF 1/8W 22Ω ±5%
R465	4701-332J-C	RCF 1/8W 3.3k ±5%
R467	4701-223J-C	RCF 1/8W 22k ±5%
R468	4701-472J-C	RCF 1/8W 4.7k ±5%
R469	4701-473J-C	RCF 1/8W 47k ±5%
R470	4701-223J-C	RCF 1/8W 22k ±5%
R471	4701-223J-C	RCF 1/8W 22k ±5%
R472	4701-103J-C	RCF 1/8W 10k ±5%
R473	4701-333J-C	RCF 1/8W 33k ±5%
R474	4701-153J-C	RCF 1/8W 15k ±5%
R475	4701-102J-C	RCF 1/8W 1k ±5%
R476	4701-222J-C	RCF 1/8W 2.2k ±5%
R477	4701-333J-C	RCF 1/8W 33k ±5%
R479	4701-331J-C	RCF 1/8W 330Ω ±5%
R480	4701-220J-C	RCF 1/8W 22Ω ±5%
R481	4701-102J-C	RCF 1/8W 1k ±5%
R482	4701-223J-C	RCF 1/8W 22k ±5%
R483	4701-682J-C	RCF 1/8W 6.8k ±5%
R484	4701-223J-C	RCF 1/8W 22k ±5%
R485	4701-122J-C	RCF 1/8W 1.2k ±5%
R486	4701-222J-C	RCF 1/8W 2.2k ±5%
R487	4701-224J-C	RCF 1/8W 220k ±5%
R488	4701-224J-C	RCF 1/8W 220k ±5%
R489	4701-273J-C	RCF 1/8W 27k ±5%
R490	4701-105J-C	RCF 1/8W 1M ±5%
R492	4701-123J-C	RCF 1/8W 12k ±5%
R493	4701-104J-C	RCF 1/8W 100k ±5%
R494	4701-473J-C	RCF 1/8W 47k ±5%
R495	4701-123J-C	RCF 1/8W 12k ±5%

NO.	PART NO.	DESCRIPTION
R496	4701-331J-C	RCF 1/8W 330Ω ±5%
R497	4701-222J-C	RCF 1/8W 2.2k ±5%
R498	4701-104J-C	RCF 1/8W 100k ±5%
R499	4701-183J-C	RCF 1/8W 18k ±5%
R500	4701-183J-C	RCF 1/8W 18k ±5%
R501	4701-472J-C	RCF 1/8W 4.7k ±5%
R502	4701-473J-C	RCF 1/8W 47k ±5%
R503	4701-2R2J-C	RCF 1/8W 2.2Ω ±5%
R504	4701-2R2J-C	RCF 1/8W 2.2Ω ±5%
R505	4701-473J-C	RCF 1/8W 47k ±5%
R506	4701-562J-C	RCF 1/8W 5.6k ±5%
R508	4701-331J-C	RCF 1/8W 330Ω ±5%
R509	4701-010J-C	RCF 1/8W 1Ω ±5%
R510	4701-330J-C	RCF 1/8W 33Ω ±5%
R511	4701-101J-C	RCF 1/8W 100Ω ±5%
R512	4701-101J-C	RCF 1/8W 100Ω ±5%
R513	4701-101J-C	RCF 1/8W 100Ω ±5%
R514	4701-330J-C	RCF 1/8W 33Ω ±5%
R515	4701-101J-C	RCF 1/8W 100Ω ±5%
R516	4701-123J-C	RCF 1/8W 12k ±5%
R517	4701-332J-C	RCF 1/8W 3.3k ±5%
R518	4701-332J-C	RCF 1/8W 3.3k ±5%
R521	4701-332J-C	RCF 1/8W 3.3k ±5%
R522	4701-334J-C	RCF 1/8W 330k ±5%
R524	4701-471J-C	RCF 1/8W 470Ω ±5%
R526	4701-332J-C	RCF 1/8W 3.3k ±5%
R527	4701-334J-C	RCF 1/8W 330k ±5%
R528	4701-101J-C	RCF 1/8W 100Ω ±5%
R529	4701-333J-C	RCF 1/8W 33k ±5%
R530	4701-153J-C	RCF 1/8W 15k ±5%
R531	4701-153J-C	RCF 1/8W 15k ±5%
R532	4701-473J-C	RCF 1/8W 47k ±5%
R533	4701-272J-C	RCF 1/8W 2.7k ±5%
R534	4701-103J-C	RCF 1/8W 10k ±5%
R535	4701-103J-C	RCF 1/8W 10k ±5%
R536	4701-331J-C	RCF 1/8W 330Ω ±5%
R537	4701-103J-C	RCF 1/8W 10k ±5%
R538	4701-562J-C	RCF 1/8W 5.6k ±5%
R539	4701-331J-C	RCF 1/8W 330Ω ±5%
R540	4701-103J-C	RCF 1/8W 10k ±5%
R541	4701-223J-C	RCF 1/8W 22k ±5%
R542	4701-223J-C	RCF 1/8W 22k ±5%
R543	4701-101J-C	RCF 1/8W 100Ω ±5%
R560	4701-332J-C	RCF 1/8W 3.3k ±5%
R561	4701-104J-C	RCF 1/8W 100k ±5%
VR401	4756-5026-3-03	SVR 5k H3 6.7X6.3
VR402	4756-5036-3-03	SVR H3 50k
VR403	4756-2036-3-03	SVR H3 20k
VR404	4756-1036-3-03	SVR 10k H3 6.7X6.3
VR405	4756-2026-3-03	SVR 2k
XT401	2300-0010-0	Crystal 4.5MHz
ZD401	4837-5V61-2	Zener Diode 1/2W 5.6V ROHM
ZD402	4837-6V21-2	Zener Diode 1/2W 6.2V ROHM
ZD403	4837-5V11-2	Zener Diode 1/2W 5.1V ROHM
ZD404	4837-8B10-2	Zener Diode 1/2W 10.2-10.6V
ZD405	4837-8C20-2	Zener Diode 1/2W 11.1-11.6V
CRN37		
C411	4060-0510-0	NEC Super Cap Fayhon 104Z
C487	157D-106M-5-GM	CE 16V 10µF ±20%
D427	4804-1480-2	Diode 1N4148
D428	4804-1480-2	Diode 1N4148
D429	4804-1480-2	Diode 1N4148
D431	4804-1480-2	Diode 1N4148
D436	4804-1480-2	Diode 1N4148
D457	4804-1480-2	Diode 1N4148
Q409	4860-0060-5	TR 8550 C/D KEC
R416	4701-223J-C	RCF 1/8W 22k ±5%
R430	4701-152J-C	RCF 1/8W 1.5k ±5%
R441	4701-333J-C	RCF 1/8W 33k ±5%
R444	4701-152J-C	RCF 1/8W 1.5k ±5%
R451	4701-152J-C	RCF 1/8W 1.5k ±5%
R452	4701-152J-C	RCF 1/8W 1.5k ±5%
R452	635N-0001-0	Jumper Wire
R466	4701-272J-C	RCF 1/8W 2.7k ±5%
CRN38		
C411	4060-0510-0	NEC Super Cap Fayhon 104Z
D428	635N-0001-0	Jumper Wire
Q409	635N-050F-5	Jumper Wire
CRN27		
C411	157C-227M-5-KW	CE 10V 220µF ±20%
C487	157D-106M-5-GM	CE 16V 10µF ±20%
D427	4804-1480-2	Diode 1N4148
D428	4804-1480-2	Diode 1N4148
D429	4804-1480-2	Diode 1N4148
D431	4804-1480-2	Diode 1N4148
D436	4804-1480-2	Diode 1N4148
D457	4804-1480-2	Diode 1N4148
Q409	4860-0060-5	TR 8550 C/D KEC
R416	4701-223J-C	RCF 1/8W 22k ±5%
R430	4701-152J-C	RCF 1/8W 1.5k ±5%
R441	4701-333J-C	RCF 1/8W 33k ±5%
R444	4701-152J-C	RCF 1/8W 1.5k ±5%
R451	4701-152J-C	RCF 1/8W 1.5k ±5%
R452	4701-152J-C	RCF 1/8W 1.5k ±5%
R452	635N-0001-0	Jumper Wire
R466	4701-272J-C	RCF 1/8W 2.7k ±5%
CRN28		
C411	157C-227M-5-KW	CE 10V 220µF ±20%
D428	635N-0001-0	Jumper Wire
Q409	635N-050F-5	Jumper Wire
CRN27, CRN28, CRN37, CRN38 AM & FM-IF TUNER BOARD		
C201	150F-152K-6-CF	CC 50V 1500pF ±10% Chip
C202	150F-223K-6-CF	CC 50V 0.022µF ±10%
C203	150F-102K-6-CF	CC 50V 1000pF ±10%
C204	150F-223K-6-CF	CC 50V 0.022µF ±10%
C205	150F-223K-6-CF	CC 50V 0.022µF ±10%
C206	157D-226M-5-IM	CE 16V 22µF ±20%
C207	150F-103K-6-CF	CC 50V 0.01µF ±10% Chip
C208	157F-335M-5-GM	CE 50V 3.3µF ±20%
C209	15CG-100J-6-CF	CTC 0/30 10pF ±5%
C210	150F-223K-6-CF	CC 50V 0.022µF ±10%
C211	150F-102K-6-CF	CC 50V 1000pF ±10%
C213	150F-223K-6-CF	CC 50V 0.022µF ±10%
C214	15CG-180J-6-CF	CTC 0/30 18pF ±5%
C215	150F-103K-6-CF	CC 50V 0.01µF ±10% Chip
C216	150F-223K-6-CF	CC 50V 0.022µF ±10%
C217	157F-104M-5-GM	CE 50V 0.1µF ±20%
C219	150F-223K-6-CF	CC 50V 0.022µF ±10%
C220	157D-476M-5-KM	CE 16V 47µF ±20%
C223	150F-223K-6-CF	CC 50V 0.022µF ±10%
C227	150F-223K-6-CF	CC 50V 0.022µF ±10%
C228	157F-335M-5-GM	CE 50V 3.3µF ±20%
C230	157E-475M-5-GM	CE 25V 4.7µF ±20%
C232	150F-103K-6-CF	CC 50V 0.01µF ±10% Chip
C233	15CG-471J-6-CF	CTC 0/30 470pF ±5%
C234	15UJ-331J-5-TE	CTC 750/120 330pF ±5%
C235	15CG-101K-6-CF	CTC 0/30 100pF ±10% Chip
C236	157F-335M-5-GM	CE 50V 3.3µF ±20%
C237	157D-226M-5-IM	CE 16V 22µF ±20%
C238	150F-103K-6-CF	CC 50V 0.01µF ±10% Chip
C239	150F-103K-6-CF	CC 50V 0.01µF ±10% Chip
C240	15CG-101K-6-CF	CTC 0/30 100pF ±10% Chip

NO.	PART NO.	DESCRIPTION
C241	150F-223K-6-CF	CC 50V 0.022μF ±10%
C242	157F-474M-5-GM	CE 50V 0.47μF ±20%
C243	157D-106M-5-GM	CE 16V 10μF ±20%
C244	150F-103K-6-CF	CC 50V 0.01μF ±10% Chip
CF201	2701-0356-0	CF PFB450J
CF202	635N-050F-5	Jumper Wire
D201	4804-1480-2	Diode 1N4148
D202	4804-1480-2	Diode 1N4148
IC201	3130-0750-0	IC LA1135
J209	4721-000J-6	RMG 1/8W 0Ω ±5%
J210	4721-000J-6	RMG 1/8W 0Ω ±5%
J211	4721-000J-6	RMG 1/8W 0Ω ±5%
J212	4721-000J-6	RMG 1/8W 0Ω ±5%
J213	4721-000J-6	RMG 1/8W 0Ω ±5%
J214	4721-000J-6	RMG 1/8W 0Ω ±5%
L201	1801-4R7K-M	Coil 4.7μH ±10%
L202	5600-0506-0	796K 7BN-A7979ADZ
L203	5600-0516-0	252K 126AN-A7988CI
L204	5600-0526-0	796K 7BN-A7981ADZ
L205	5600-0536-0	252K 126AN-A7987CI
L207	5600-0546-0	796K 7BO-A7984BCO
L208	5600-0556-0	796K 7BO-A7983NM
L209	1807-220J-P	Ferrite Coil 22μH BL8.5
L210	5600-0566-0	455k 7MC-A7985EK
L211	5600-0576-0	450K 7MC-A7995DC
Q201	485C-536G-5	TR 2SC536G
Q202	485C-536G-5	TR 2SC536G
Q203	485C-536G-5	TR 2SC536G
Q204	485C-536G-5	TR 2SC536G
Q205	490K-184G-5	FET2SK184GR IDS2.6-6.5MA
Q208	485C-536G-5	TR 2SC536G
Q209	485C-536G-5	TR 2SC536G
Q210	485C-536G-5	TR 2SC536G
Q211	485C-536G-5	TR 2SC536G
Q212	485A-608G-5	TR 2SA608G
Q213	4860-0130-5	TR 2SD1111
Q217	490K-163M-5	FET 2SK163M
R201	4721-223J-6	RMG 1/8W 22k ±5% Chip
R202	4721-680J-6	RMG 1/8W 68Ω ±5%
R203	4721-104J-6	RMG 1/8W 100k ±5% Chip
R204	4721-220J-6	RMG 1/8W 22Ω ±5%
R205	4721-224J-6	RMG 1/8W 220k ±5%
R206	4721-104J-6	RMG 1/8W 100k ±5% Chip
R207	4721-101J-6	RMG 1/8W 100Ω ±5% Chip
R209	4721-563J-6	RMG 1/8W 56k ±5% Chip
R210	4721-102J-6	RMG 1/8W 1k ±5% Chip
R211	4721-224J-6	RMG 1/8W 220k ±5%
R212	4721-103J-6	RMG 1/8W 10k ±5% Chip
R213	4721-220J-6	RMG 1/8W 22Ω ±5%
R215	4721-223J-6	RMG 1/8W 22k ±5% Chip
R217	4721-102J-6	RMG 1/8W 1k ±5% Chip
R218	4721-103J-6	RMG 1/8W 10k ±5% Chip
R219	4721-152J-6	RMG 1/8W 1.5k ±5% Chip
R220	4721-103J-6	RMG 1/8W 10k ±5% Chip
R222	4721-103J-6	RMG 1/8W 10k ±5% Chip
R223	4721-683J-6	RMG 1/8W 68k ±5%
R226	4721-104J-6	RMG 1/8W 100k ±5% Chip
R227	4721-103J-6	RMG 1/8W 10k ±5% Chip
R229	4721-103J-6	RMG 1/8W 10k ±5% Chip
R230	4721-820J-6	RMG 1/8W 82Ω ±5% Chip
R232	4721-223J-6	RMG 1/8W 22k ±5% Chip
R233	4721-105J-6	RMG 1/8W 1M ±5%
R234	4721-222J-6	RMG 1/8W 2.2k ±5% Chip
R241	635N-110F-5	Jumper Wire
R244	4721-000J-6	RMG 1/8W 0Ω ±5%
TC202	1551-0120-0	Trim. 10pF TZ03N100ER
TC203	1551-0050-0	Trim. 20pF T203P200
TC204	1551-0030-0	Trim. 60pF T2309600
TC205	1551-0030-0	Trim. 60pF T2309600

NO.	PART NO.	DESCRIPTION
VD201	484C-321D-5	AM Vari. Cap Diode SVC321-D
VD202	484C-321D-5	AM Vari. Cap Diode SVC321-D
VD203	484C-321D-5	AM Vari. Cap Diode SVC321-D
VR201	4755-2036-3-01	SVR 20k
CRN27, CRN28, CRN37, CRN38 FM-RF TUNER BOARD		
C101	150F-180K-5-GG	CC 50V 18pF ±10%
C102	150F-080D-5-GG	CC 50V 8pF ±0.5pF
C104	150F-102K-5-IF	CC 50V 1000pF ±10%
C105	150E-103M-5-IF	CC 25V 0.01μF ±20%
C106	150F-050D-5-GG	CC 50V 5pF ±0.5pF
C107	150F-100D-5-GG	CC 50V 10pF ±0.5pF
C108	150F-101K-5-IF	CC 50V 100pF ±10%
C110	150F-120K-5-GG	CC 50V 12pF ±10%
C111	150F-010C-5-GG	CC 50V 1pF ±0.25pF
C112	150F-102K-5-IF	CC 50V 1000pF ±10%
C113	150F-102K-5-IF	CC 50V 1000pF ±10%
C114	150F-102K-5-IF	CC 50V 1000pF ±10%
C117	150E-103M-5-IF	CC 25V 0.01μF ±20%
D101	4804-1480-2	Diode 1N4148
L101A	1804-0090-0	Spring Coil
L101B	1804-0050-0	Spring Coil
L102	1804-0060-0	Spring Coil
L103A	1804-0100-0	Spring Coil
L103B	1804-0070-0	Spring Coil
L104	1802-0070-0	Ferrite Adj. Coil
L105	1804-0080-0	Spring Coil
L106	1801-2R2M-M	Coil 2.2μH ±20%
L107	5600-0286-0	10.7M HKS-818-009
Q101	490K-107F-5	FET 3SK107F IDS5-12mA
Q102	4851-923Y-5	TR 2SC1923Y
Q103	4905-484Z-5	FET 2N5484
Q104	4905-484X-5	FET 2N5484
Q105	485C-5490-5	TR BC549
R101	4705-473J-5	RCF 1/4W 47k ±5%
R102	4705-473J-5	RCF 1/4W 47k ±5%
R103	4705-101J-5	RCF 1/4W 100Ω ±5%
R104	4705-473J-5	RCF 1/4W 47k ±5%
R105	4705-225J-5	RCF 1/4W 2.2M ±5%
R106	4705-103J-5	RCF 1/4W 10k ±5%
R107	4705-101J-5	RCF 1/4W 100Ω ±5%
R110	4705-103J-5	RCF 1/4W 10k ±5%
TC101	1551-0050-0	Trim. 20pF T203P200
VD101	484V-C211-5	Varactor Diode SVC211SP
VD102	484V-C211-5	Varactor Diode SVC211SP
VD103	484V-C211-5	Varactor Diode SVC211SP
CRN27, CRN28, CRN37, CRN38 TONE CONTROL BOARD		
C301	153F-822K-5-KW	CM 50V 8200pF ±10%
C302	157D-106M-5-GMT CE 16V 10μF ±20%	
C303	157F-225M-5-GM	CE 50V 2.2μF ±20%
C304	153F-822K-5-KW	CM 50V 8200pF ±10%
C306	157C-476M-5-KM	CE 10V 47μF ±20%
C307	150F-103M-5-FC	CM 16V 0.01μF ±10%
C308	150F-103M-5-FC	CM 16V 0.01μF ±10%
C309	153F-473K-5-OS	CM 50V 0.047μF ±10%
C310	153F-473K-5-OS	CM 50V 0.047μF ±10%
C321	157C-107M-5-KM	CE 10V 100μF ±20%
C322	157F-105M-5-GM	CE 50V 1μF ±20%
C323	157F-225M-5-GM	CE 50V 2.2μF ±20%
C324	157F-105M-5-GM	CE 50V 1μF ±20%
C325	157F-225M-5-GM	CE 50V 2.2μF ±20%
C326	153F-273K-5-MW	CM 50V 0.027μF ±10%
C327	153F-273K-5-MW	CM 50V 0.027μF ±10%
D301	4804-1480-2	Diode 1N4148
D302	4804-1480-2	Diode 1N4148
D303	4804-1480-2	Diode 1N4148

NO.	PART NO.	DESCRIPTION
D304	4804-1480-2	Diode 1N4148
Q302	485C-536G-5	TR 2SC536G
Q303	485C-536G-5	TR 2SC536G
Q305	485C-536G-5	TR 2SC536G
Q306	485C-536G-5	TR 2SC536G
Q309	485C-536G-5	TR 2SC536G
Q310	485C-536G-5	TR 2SC536G
R301	4701-332J-C	RCF 1/8W 3.3k ±5%
R302	4701-223J-C	RCF 1/8W 22k ±5%
R303	4701-472J-C	RCF 1/8W 4.7k ±5%
R304	4701-104J-C	RCF 1/8W 100k ±5%
R305	4701-223J-C	RCF 1/8W 22k ±5%
R306	4701-332J-C	RCF 1/8W 3.3k ±5%
R307	4701-681J-C	RCF 1/8W 680Ω ±5%
R308	4701-223J-C	RCF 1/8W 22k ±5%
R309	4701-104J-C	RCF 1/8W 100k ±5%
R310	4701-104J-C	RCF 1/8W 100k ±5%
R311	4701-223J-C	RCF 1/8W 22k ±5%
R312	4701-332J-C	RCF 1/8W 3.3k ±5%
R313	4701-332J-C	RCF 1/8W 3.3k ±5%
R318	4701-102J-C	RCF 1/8W 1k ±5%
R319	4701-102J-C	RCF 1/8W 1k ±5%
R320	4701-681J-C	RCF 1/8W 680Ω ±5%
R321	4701-681J-C	RCF 1/8W 680Ω ±5%
R322	4701-105J-C	RCF 1/8W 1M ±5%
R323	4701-681J-C	RCF 1/8W 680Ω ±5%
R324	4701-472J-C	RCF 1/8W 4.7k ±5%
R325	4701-105J-C	RCF 1/8W 1M ±5%
R326	4701-472J-C	RCF 1/8W 4.7k ±5%
R327	4701-561J-C	RCF 1/8W 560Ω ±5%
R328	4701-681J-C	RCF 1/8W 680Ω ±5%
ZD301	4837-3C20-2	Zener Diode 1/2W 4.1-4.3V
CRN27 and CRN37		
Q304	4860-0050-5	TR 8050 C/D KEC
VR301	4755-5026-3-01	SVR 5k V3 6.4X7.8 01
CRN27 & CRN37 VF/SDK BOARD		
C701	153F-104K-5-KMM	CM 50V 0.1μF ±10%
C702	153F-104K-5-KMM	CM 50V 0.1μF ±10%
C703	157F-475M-5-GM	CE 50V 4.7μF ±20%
C704	15CG-471J-7-IJ	CTC 0/30 470pF
C705	150F-560J-5-IF	CC 50V 56pF ±5%
C706	153F-104K-5-KMM	CM 50V 0.1μF ±10%
C707	153F-104K-5-KMM	CM 50V 0.1μF ±10%
C708	153F-683J-5-NLM	CM 50V 0.068μF ±5%
C709	153F-683J-5-NLM	CM 50V 0.068μF ±5%
C710	153F-104K-5-KMM	CM 50V 0.1μF ±10%
C711	150F-154M-5-II	CC 50V 0.15μF ±20%
C712	153F-104K-5-KMM	CM 50V 0.1μF ±10%
IC701	3130-1140-0	IC TDA1579
L701	5600-1696-0	Coil RBMA
Q701	485C-536G-5	TR 2SC536G
Q702	485C-536G-5	TR 2SC536G
R701	4701-562J-C	RCF 1/8W 5.6k ±5%
R702	4701-393J-C	RCF 1/8W 39k ±5%
R703	4701-393J-C	RCF 1/8W 39k ±5%
R704	4701-184J-C	RCF 1/8W 180k ±5%
R705	4701-103J-C	RCF 1/8W 10k ±5%
R706	4701-103J-C	RCF 1/8W 10k ±5%
R707	4701-153J-C	RCF 1/8W 15k ±5%
R708	4701-183J-C	RCF 1/8W 18k ±5%
R709	4701-273J-C	RCF 1/8W 27k ±5%
R710	4701-394J-C	RCF 1/8W 390k ±5%
R711	4701-683J-C	RCF 1/8W 68k ±5%
R712	4701-473J-C	RCF 1/8W 47k ±5%
R713	4701-684J-C	RCF 1/8W 680k ±5%
R714	4701-153J-C	RCF 1/8W 15k ±5%

NO.	PART NO.	DESCRIPTION
R716	4701-472J-C	RCF 1/8W 4.7k ±5%
R717	4701-431J-C	RCF 1/8W 430 ±5%
R718	4701-224J-C	RCF 1/8W 220k ±5%